“Experiment and Good Sense Must Direct You”: Managing Health and Sickness in the British Plantation Enlightenment, 1756-1815.

by
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Abstract

Between the start of the Seven Years' War in 1756 and the end of Napoleonic Wars in 1815 enslaved patients, plantation managerial staff, healing adepts, and military and urban practitioners in the Greater Caribbean (a region that encompassed the plantation societies of the Carolina Lowcountry and the Anglophone West Indies) exchanged medical know-how, therapeutic information, and patient narratives. In so doing they not only made what were previously ephemeral and elusive knowledges of illness and its cure in the Greater Caribbean more enduring, they transformed plantations in the region into vibrant yet coercive spaces of medical knowledge-making. This dissertation spotlights the role of military practitioners, urban physicians, plantation managerial staff, and enslaved healers and patients in generating new ideas about illness. Over the course of six decades, these groups forced a paradigm shift in ideas about illness from a classical humoral-model to the modern disease framework. Grappling with tropical fevers during the Seven Years' War, regimental practitioners created intellectual scaffolding for thinking about fevers and disease in the tropics writ large. Their conclusions obtained both for the military rank and file and for plantation slaves, and also fundamentally transformed how healers throughout the region understood illness. Urban practitioners subsequently gathered observations from plantation managers and enslaved healers to recast illnesses common among plantation populations, such as locked-jaw, yaws, and dirt-eating, as distinctive disease entities.

The immediate consequences of this intellectual work were regional: it expanded the interpretive chasm between European-trained "country practitioners" and their enslaved patients and increased conflicts over the interpretation over what had caused an enslaved person's illness and what was needed to restore her to health. During the era of

abolition, however, anti-slavery reformers in metropolitan Britain used the new explanations of plantation diseases to agitate for the reform of British Caribbean slavery.

Diseases are not transparent reflections of the natural world; they are instead the product of local conflicts and epistemological struggles to differentiate an ailment from others like it, to determine how it came to be and what should be done to treat it, and to assign interpretive power to specific occupational or political groups who make these determinations. Taking as its point of departure the insight that diseases are preeminently cultural objects, each chapter in this dissertation excavates the development of disease categories that historical actors linked to enslaved plantation populations. It examines how urban practitioners carved out distinctive diseases from the welter of symptoms and signs that healing adepts, managerial staff, and enslaved patients conveyed. The intersection of the local political economy of slavery with enslaved patients' resistance, this dissertation shows, profoundly shaped the development of different categories of disease in the Greater Caribbean during the period.

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INTRODUCTION

During the last quarter of the eighteenth century, the slave hospitals on British West Indian plantations swelled with young children complaining of sore throats. Initially, their parents did not see any cause for alarm. "As they appeared to have only slight colds," their parents "did not consider they required medicine," George Farquhar, a physician who attended the Killets estate in Clarendon, Jamaica later relayed to the editors of a medical periodical.[1] The lack of alarm was understandable given the mildness of the initial symptoms. On a St. Vincent plantation that John Collins attended, a young boy had complained about his sore throat to his mother. Yet his mother reported, he also "slept well and ate with a pretty good appetite, though he swallowed with some difficulty, [and] his body was regular."[2] His condition suggested that his mother had little reason to worry. What then, was there to fear from a sore throat?

Most whites and enslaved people witnessing localized throat pain among children had no reason to suspect the presence of a deadly disorder. How could they when, as Collins admitted, the initial presentation of the symptoms were deceptive? "Indeed from symptoms so mild, I myself entertained but little doubt of his recovery," Collins wrote of one of his first patients.[3] There were some signs that the boy's illness might worsen. Collins spotted "a small ulcer the size of a silver penny on the anterior part of the uvula." But the boy was "free from fever," his pulse remained "almost in a natural state," and he

[1] George Farquhar, "The Angina Maligna Successfully Treated by Mercury and Capsicum Gargle, By George Farquhar, M.D. of Clarendon Jamaica," *The Philadelphia Medical Museum (1805-1810),* 1 (January 3, 1805): 266-270, p. 266.
[2] Dr. Adair Crawford, "Two Letters from John Collins, Esq. of the Island of St. Vincent, addressed to Benjamin Vaughan Esq of London, on the subject of a species of Angina Maligna, and the use of Capsicum in that and several other Diseases," *Medical Communications,* 2 (1784): 363-385, p. 366.
[3] Crawford, 366.

"still sat up and moved as if little had ailed him."[4] A "fine young mulatto girl, about six or seven years old," came two days later to the hot-house. She complained of the same pains but her overall condition also suggested her illness was mild. A third, "of much about the same age," was also brought to Collins with similar ulcerations, but no fever.[5]

It was only after a sad turn of events in St. Vincent and Jamaica that laypeople and experts had reason to construe mild infirmity in the throat among young children as a sign of an often deadly medical disorder: Angina Maligna, or, in laymen's terms, the Putrid Sore Throat. Frequent throughout Europe, angina maligna remained rare in tropical climates. Collins witnessed the "first of the true angina maligna that had occurred to me during eighteen-years residence in the West Indies," only recently, when it struck down the child of an acquaintance.

A week later after the enslaved boy Collins attended initially complained of his symptoms, a high fever beset him. His case went downhill from there; he died within two weeks.[6] The case of the young mulatto girl who entered the hospital shortly after the young boy followed a similar trajectory—her symptoms were initially mild, and Collins treated them with applied blisters and bark. But a week later a "fever came on as before," and she died within six or seven days. The third patient's illness followed the same course. When Collins retrospectively analyzed the cases as a group, he confirmed that they had followed a similar progress.

Collins considered himself lucky to have eventually learned to identify these symptoms as the signs of the angina maligna, but he acknowledged that the identification

[4] Idem, 365.
[5] Ibid., 369.
[6] Crawford, 368.

was made possible by the misfortunes he had witnessed on the estate he attended and those of his friends. Shortly before the disease arrived on his plantation, Collins witnessed the disorder in the home of his friend and learned that a "similar complaint of the throat" had recently terminated the life of two young slave children on an estate in the vicinity. The existence of three cases that followed a similar progress confirmed for Collins his initial diagnosis. The subsequent deaths of children across the island further affirmed his diagnosis. "The ravages of the disorder had not been confined to my estate but had extended to others and affected the white children as well as the negroes," Collins wrote, describing the extent of the outbreak. With the initial symptoms so mild, the only thing indicating the disease's arrival on the St. Vincent plantation was the existence of other confirmed cases in the vicinity. It was thus only after half a dozen children sickened and died following these symptoms, that observers learned to anticipate local complaint of the throat, coupled with ulcers, and a lack of fever as the onset of a distinctive and deadly throat distemper.

The diagnosis of the species of angina maligna distinctive to the West Indies was contingent on the existence of a number of patients who had sickened with it. In fact, white managerial staff encountered great difficulties diagnosing the ailment when only one or two complained of their symptoms. When it was not possible to identify a pattern or similarities in the signs of the disorder because an insufficient number of people had sickened with it, the ailment's ambiguity produced conflicts between slaves and overseers over what type of malfeasance—physiological, supernatural, or environmental—the symptoms indicated. Between July and September of 1807, George, Joe, and a third, unnamed son of Johanna, an enslaved woman who lived on the Trouthall plantation in

Jamaica, which was managed by the estate's overseer, William Anderson, died in quick succession after complaining of pain in their throats. In explaining the boys' sudden demise to the estate's absentee owner, William Chisholm, the overseer Anderson, created a chronology for the events that began with the onset of their symptoms in July for the first two and then late August for the third and ended with their deaths shortly thereafter. When he relayed the circumstantial details surrounding the boys' deaths to Chisholm, Anderson's timeline identified the putrid sore throat as the cause of their initial symptoms and their eventual demise. But he also admitted that he could only identify it as such retrospectively, once other children had died after manifesting the same symptoms. Anderson did not initially realize, he wrote, that Johanna's boys' complaints were serious. "It is as plain to every person that the children died of putrid sore throat; and the first two evidently from not being observed in time, they being the first that had the disorder in this vicinity," Anderson explained to Chisholm.[7]

It was thus only after several young children on the plantation and on estates nearby had died after complaining of throat pain that, Anderson explained, he reexamined the circumstances surrounding the boys' illnesses and deaths with a new perspective. With the new information at his disposal, Anderson attributed their initial symptoms and their subsequent deaths to the putrid sore throat. His narrative created an archive of the misfortune that foregrounded the environmental origins of the sufferers' symptoms and silenced other explanations. Absent large numbers of patients manifesting the same symptoms and prognosis, it was difficult to determine whether children's reports of pain

[7] The events discussed in the next three paragraphs, with the exception of footnote # 8, are all relayed in William Anderson, Jamaica to James Chisholm, September 6, 1807, Chisholm Family Papers, MS 5466, National Library of Scotland, Edinburgh (hereafter Chisholm Family Papers).

in the throat indicated a local complaint or was the sign of a much more serious distemper still in its milder state.

Indeed, absent multiple deaths, other explanations for what had caused the sufferers' demise remained plausible, especially among the enslaved people who lived on the estate. In a world where the etiological origins of illness could be traced to poisons or the spirits of the dead visiting the living to right social wrongs, there was no reason to believe to link individual deaths to the symptoms of throat pain, as managerial staff had. Especially when an overseer, like Anderson, only arrived at a diagnosis several months after the fact.[8] When conflicts in the slave community preceded the illness, white etiologies that attributed the ensuing deaths to a disease denied the efficacy of Obeah and sacral forces to right past wrongs. The boys' surviving family members, Johanna (the boys' mother), their father, their grandmother, and their uncle, Harry Brown, as well as London, Trouthall's head driver, in fact, saw things quite differently from William Anderson.

Their timeline for the boys' death stretched back to the beginning of the crop season, (between February and May of 1807) and implicated Obeah as the material cause of the boys' illnesses. "Sometime in the beginning of crop," Trouthall's 2nd driver, Naphier, the second highest-ranking male on the estate and a boatswain, attempted to convince Johanna to leave her husband, the head carpenter at Frankenfield, an adjacent plantation. Johanna refused several times, and Naphier took her rebuttals as a grave insult

[8] This was not the first time that Anderson struggled to diagnose and differentiate between ailments. Around 1807 Anderson reported to Chisholm that "the influenza and pleurisy, for I cannot distinguish between them," were so violent on Chisholm's plantation in January and December that the overseer had often applied three blisters to a single patient. William Anderson, Jamaica to James Chisholm, ND, Chisholm Family Papers.

to his dignity. His first attempt occurred at the beginning of harvest and boiling season. Johanna's husband, the head carpenter, left her as a consequence of Naphier's advance. It was then that, as Anderson wrote: "Naphier thought her his own. It was not the case." Naphier threatened Johanna after this second rejection and she complained to Trouthall's head drivers of his harassment. The drivers reprimanded him in sight of Johanna and threatened to bring the matter to Anderson if Naphier continued to try to coax Johanna into partnering with him through intimidation. Shortly thereafter, George and Joe (Johanna's sons) complained of throat pain and subsequently died. Johanna and her mother begged Naphier for the life of Johanna's remaining son, who had since become sick. Johanna and her mother claimed that Naphier refused.[9] "A great deal was said of visits in the night," that Naphier made to "an old hag at Thomas River, and also of her being here with him," Anderson reported. The same, undisclosed source in Anderson's account identified the old woman as "a professor of that dreaded trade [Obeah]."

When Johanna's third son sickened, she took action and formed a party to capture Naphier. Gathering up her mother, brother, the boy's father, and another head driver who believed that Naphier had stolen his wife from him the previous year, the group seized Naphier and threatened to bring him to Anderson for punishment. Naphier begged for his release, falling to his knees and kissing Johanna's mother's feet. He swore to Johanna's mother that he was done harming her family. As proof of his intentions to end his aggression, he promised that the following day, Sunday, the slaves' day off, he would "clear the yard of what was doing the mischief." Yet Sunday morning came and Naphier had disappeared. Frantic, the family went to Anderson and relayed to him the events that

[9] "She [Johanna] and her mother went to Naphier to beg him for the child's life. He gave them no satisfaction." William Anderson, Jamaica to James Chisholm, September 6, 1807, Chisholm Family Papers.

had passed. Yet an ineffectual Anderson was hamstrung as "nothing came out to prove his [Naphier] getting any thing of a deleterious nature from her," [the old woman and Obeah sorceress]. Naphier did acknowledge, however, that he had acquired a "bottle for himself to take." "Perhaps he suspected that was known," Anderson surmised, explaining why Naphier would acknowledge having received a bottle of unknown but perhaps poisonous contents from the Obeah woman. Unsure of what to do and whom to believe, Anderson relayed the entire episode to Chisholm, who, as the estate's absentee owner, retained the authority to judge Naphier and determine his fate. At some point after Naphier reneged on his promise to defuse the Obeah curse, Johanna's third son died. The chronology of the events in Johanna's life that had taken place during the most recent sugar harvest clearly implicated Naphier and his purchase of an Obeah curse as the cause her family's misfortune, not an ailment whose materiality and identity the hapless Anderson detected many months later.

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The regularity that children of different rank and status in St. Vincent, Jamaica, and islands throughout the Caribbean died following complaints of sore throats was terrifying. Yet the perceivable overlaps in the cases, especially the patients' train of symptoms and the young age of its victims, suggested similarities between the cases. Collins and Farquhar both noted the inefficacy of therapeutics that, in North America and Britain, abated these symptoms and also wrote that it prevailed in particular micro-climates. Medical men like John Collins and George Farquahar collected and disseminated information on the similarities in the victims' age, the disorder's progress, its resistance to barks and astringent gargles, and its prevalence in particular geographic

regions. Such descriptions appeared in letters to medical friends, in diaries, and in articles printed in medical periodicals. Amassed as a group, descriptions of the putrid sore throat, as Collins argued in a letter to a friend in Edinburgh, proved its distinctiveness a "*species* of Angina Maligna," native to the Caribbean. In foregrounding its characteristics, Collins and other writers like him gave the disorder its chief attributes and thus, a distinct identity.[10]

This dissertation focuses on plantations and ports in the Greater Caribbean to position the region as a distinctive space of medical knowledge-making during the second half of the eighteenth-century.[11] I argue that the codification of disorders like the putrid sore throat as formal diseases occurred between the outbreak of the Seven Years' War in 1756 and the end of Anglo-French conflict in the region in 1815, and show that this development was the product of conflicts between enslaved patients, African and Afro-Creole healing adepts, white managerial staff, and practitioners over illness, its causes, and treatment. The period around which this dissertation is organized witnessed the

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[10] Crawford, 370.

[11] Historians of early America/ the Anglophone Atlantic have recently used the term "Greater Caribbean" to position South Carolina and Georgia as part of a broader Anglophone Caribbean plantation complex that included Jamaica and the Anglophone Lesser Antilles. The seed concepts for the idea of a Caribbean world connected to North and South America through culture and trade originated with Immanuel Wallerstein and his discussion of an "extended Caribbean" in *The Modern World System,* vol. 2: *Mercantilism and the Consolidation of the European World Economy, 1600-1750* (New York: Academic Press, 1974), 103. Historian working on the subtropical mainland plantation colonies typically use this term to denote that South Carolina and Georgia were, beginning in 1640, linked through people, trade, and laws to the Caribbean sub-regions discussed above. Here I use the geographical construct of the "Greater Caribbean" to advance the claim that knowledge and ideas along with goods and people moved freely between the Anglophone Caribbean and the Carolina Lowcountry. On the use of this term and its meaning for South Carolina and its connections to the West Indies see Mathew Mulcahy, *Hubs of Empire: The Southeastern Lowcountry and the British Caribbean* (Baltimore: Johns Hopkins University Press, 2014); Jack P. Greene, "Colonial South Carolina and the Caribbean Connection," in Greene, *Imperatives, Behaviors, and Identities: Essays in Early American Cultural History* (Charlottesville, VA.: University of Virginia Press, 1992):68-86; Justin Roberts and Ian Beamish, "Venturing Out: The Barbadian Diaspora and the Carolina Colony, 1650-1685," in Michelle LeMaster and Bradford Wood, eds. *Creating and Contesting Carolina: Proprietary Era Histories* (Columbia, SC: University of South Carolina Press, 2013), 49-72; Edward Rugemer, "The Development of Mastery and Race in the Comprehensive Slave Codes of the Greater Caribbean during the Seventeenth Century," *William and Mary Quarterly,* 70 (2013):429-58.

intensification of Anglo-French conflict and the Atlantic slave trade in the Greater Caribbean and an increased critique of West Indian plantation slavery among metropolitan Britons, who were beginning to be concerned about the effects of slavery on the moral character of the British Empire. These developments created the conditions for the transformation of the region into a vibrant space of medical knowledge making. This project spotlights in particular the intellectual and cultural histories of disorders associated primarily with field slaves—yaws, dirt-eating, and tetanus. It traces the transformation of these disorders into diseases, showing how knowledge about them evolved as informal descriptions about their appearance and cure, which circulated among white managerial staff and plantation slaves, came under the purview of practitioners, some of which were military men and others were physicians living in the region's port cities. Practitioners used information collected from large plantations to classify these disorders as specific disease entities with distinctive etiologies and cures. Contests between enslaved patients and a range of different healers created diseases, disinterring them from their indistinctness as clusters of symptoms and painful sensations and according them with distinctive physical attributes and causes.

At mid-century laypeople in the Greater Caribbean distinguished most physical disorders according to their unique cluster of symptoms and painful sensations and attributed these developments to imbalance within the sufferers' humors. These disorders became diseases towards the end of the century, when practitioners distinguished them by their unique etiological origins. This maneuver singled out the unique environmental, physiological, social, and behavioral matrix of factors that produced a disease and affixed to it properties (inflammatory, bilious, putrid) that communicated how it passed through

and corrupted different internal systems of the body, the manner and extent to which it could move across geographic space, its duration, and violence. Finally, in settling upon etiologies for diseases that tended to prevail on large estates and afflict plantation slaves, managerial staff and practitioners believed they had gained insight into the materials and medical regimens that would function as these diseases' antidotes.

The elaboration of ailments into distinctive diseases took place when overseers, attorneys, and plantation surgeons—a group I refer to throughout the dissertation as white managerial staff— moved information and observations they had collected on plantations to resident practitioners working in the European tradition. But the circulation of new medical information was never unidirectional. As practitioners began to classify different types of plantation ailments as diseases, white managerial staff adapted the technologies prevalent among medical men to ascertain the origins of slaves' illnesses. Adopting practitioners' contention that causality rather than symptoms was the best way to sort and differentiate disorders from one another, managerial staff organized quotidian weather occurrences into patterns and correlated them with the explosion of sickness on an estate, drew relationships between the presence of noxious vapors on an estate and the illness of those working and living in proximity to them. Opening up dead bodies of enslaved people, practitioners and elite lay observers attempted to discover the particular organs or systems disrupted by an ailment and linked the environmental or physiological origins of an ailment with its pathological progress. Distinguishing ailments by their unique cluster of causes that gave rise to them rather than thinking of them as the product of organic disruption (or imbalance) that was unique to the patient was a method of proceeding that was intellectually coherent with the plantation managerial practice of conceptualizing

groups of slaves as working units. Circulating and comparing their findings orally and in correspondence with absentees, middling people on large estates gave a disorder a shape through its unique cluster of causes, its physical manifestation, and duration. In so doing, these groups laid the groundwork for describing plantation diseases as those that affected populations rather than individual enslaved patients with idiosyncratic constitutions and disrupted humors.

As Johanna and her family's alternative narrative suggests, the resolution of diseases' etiologies had political as well as therapeutic ramifications. Certifying a disease's cause often meant that enslaved people's explanations that attributed a disorder's appearance to the transgression of social norms in the slave community or to obeah were further stigmatized as backwards. Furthermore, this development negated enslaved peoples' claims that disorders came from the more prosaic consequences of starvation and overwork. The determination of a disease's etiology by white managerial staff and urban practitioners thus often removed the communicative potency of illness or physical sensations of pain to communicate what could not always be specified directly: that malnourishment, exhaustion, and insufficient clothing and shelter were detrimentally affecting slaves' health. At the same time, the certification of a disease's etiology legitimated draconian forms of bodily management that regulated slaves' movement, hygiene, and social lives in the service of disease prevention.

The well-known shift this project problematizes concerns the movement, in elite and ordinary medical thinking, from imbalance in the individual arrangement of a patient's humors or fluids as a causal explanation for illness.[12] Scholars traditionally

[12] Owsei Tempkin, *Galenism: Rise and Decline of a Medical Philosophy* (Ithaca: Cornell University Press, 1973).

mark this paradigm shift as occurring as a result of the rise of the Parisian clinic in the early nineteenth-century.[13] The demise of humoral-based explanations of illness, scholars argue, was concurrent with the rise of hospital-based medicine and the denigration of patients' authority to interpret their bodies' responses to sudden changes in their emotions, diets, and habitations. Yet according to historians skeptical of the moral value attributed to the clinical approach, this shift in medical thinking made the human body, rather than individual people, the object of research. In this telling, Paris' technologies of observation, such as the stethoscope, physical examination, and tissue pathology simultaneously identified maladies of tissues and organs, refocused attention on the body itself as a site of knowledge, and elided the personhood of the patient.[14]

More recently, historians of medicine in the British Empire, namely Mark Harrison and Erica Charters, have challenged the geography and timing of these older accounts of the clinical approach and the positive valuation of empiricism in British medicine. Their scholarship spotlights the role of eighteenth-century Anglo-French military and naval conflicts in tropical theaters of warfare, namely in the East and West Indies. They argue that the opportunities for post-mortem dissections and far-distance of military medical men from traditional medical authorities in the British Isles facilitated

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[13] The standard treatment of the Paris medical school is Erwin H. Ackerknecht, *Medicine at the Paris Hospital, 1794-1848* (Baltimore, Johns Hopkins University Press, 1967). For the selective translation of Parisian medicine into nineteenth-century American medicine see John Harley Warner, *Against the Spirit of System: The French Impulse in Nineteenth-Century American Medicine* (Baltimore: Johns Hopkins University Press, 1998). A good overview of the revisionist literature on the Parisian Clinic can be found in Ann La Berge and Caroline Hannaway, "Paris Medicine: Perspectives Past and Present," *Clio Medica*, 50 (1991): 1-69. For a revisionist history that places the Paris clinic as the culmination of practices already underway in Britain see Othmar Keel, " Was Anatomical & Tissue Pathology a Product of the Paris Clinical School or not?" *Clio Medica,* 50 (1991): 117-186; idem, "The Politics of Health & the Institutionalization of Clinical Practices in Europe in the second half of the Eighteenth Century," in W.F. Bynum & Roy Porter eds., *William Hunter and the Eighteenth Century Medical World* (Cambridge: Cambridge University Press, 1985), 205-256.

[14] Michel Foucault, *The Birth of the Clinic: An Archaeology of Medical Perception*, trans. A.M. Sheridan Smith (first French ed. 1963; New York: Pantheon Books, 1973).

this larger shift in medical thinking. Harrison and Charters point to the surgeons and physicians who attended regiments or worked in military or naval hospitals during these conflicts as pivotal to this shift. When they returned to British soil, military and naval medical men proclaimed that their experiences in the field conferred upon them greater epistemic authority than that of the Royal College of Physicians in London, whose members' medical thinking was far too dominated with the theoretical precepts of classical antiquity. The challenges military medical men issued in their pamphlets and books subsequently influenced medical thinking at the medical school at the University Edinburgh and drove British medicine towards a more empirical and less theoretically-encumbered approach to the study of illness and its treatment.[15]

The periodization and spatial reference points of this dissertation reflect my contention that in order to fully appreciate the timing and geography of this shift, the ideas contained within it, as well as the range of actors who were instrumental to it, we must pay greater attention to the specific political economy of slavery and warfare that was unique to the Greater Caribbean. The ideas and practices described by Harrison and Charters did not develop in isolation from the Caribbean's plantation complex but were instead strengthened as a result of the British military's and Royal Navy's proximity to it. The Greater Caribbean provided multiple opportunities to witness and analyze the progress of illness among large groups of people, most of whom were laboring dependents, who suddenly manifested with the same symptoms. Between the outset of

[15] Erica Charters, *Disease, War and the Imperial State: The Welfare of the British Armed Forces during the Seven Year's War* (Chicago: University of Chicago Press, 2014); Mark Harrison, *Medicine in an Age of Commerce and Empire, Britain and its Tropical Colonies, 1660-1830* (Oxford: Oxford University Press, 2011), 1-28; Catherine Kelly, *War and the Militarization of British Army Medicine, 1793-1830* (London: Pickering and Chatto, 2011), 1-10.

the Seven Years' War in 1756 and the end of Napoleonic warfare in 1815, outbreaks of epidemics occurred with regular frequency among military troops, plantation slaves, and naval fleets. The region's status as a charnal house afforded new opportunities to witness illness on a large scale and to open up dead bodies from the corpses of different laboring populations, giving bedside observers impressions about illness that diverged from those pervasive in Britain.

The similar challenges that the British military, Royal Navy, and plantation society faced in dealing with illness as it manifested among potentially alien and hostile dependents facilitated the elaboration of regimes of body management that were unique to the Caribbean and depended upon the exchange and circulation of managerial information and prescriptive edicts related to the care of numerous dependents. This circumstance in turn, encouraged the development of similar strategies for the observation and management of sickness among officers, captains, and plantation overseers. Plantation society in the Greater Caribbean in particular created the conditions for the evolution of draconian observational practices and habits of thought that diminished the importance of patients' narratives, clustered patients into populations sorted by particulars in their physiology, and conceptualized disease as a discernable entity. Tracing the development of a disease-model of illness requires looking at interactions between plantations, regiments, and squadrons within a geographically, economically, and socially distinctive subsection of the British Empire, rather than throughout it.

Most people in Britain encountered illness when it occurred in individual patients, a circumstance that encouraged the persistence of traditional explanations for illness, in

which signs and symptoms were attributed to imbalance within the patient's idiosyncratic constitution (or, imbalance in the particular arrangement of the patient's humors).[16] In the humoral model, changes in diet, relocation to an alien climate, uncharacteristic physical expenditure, or a sudden change in a person's emotions wreaked havoc on a person's humoral equilibrium. Bedside signs, measured by taking account of a patient's pulse, breath, sweat, and skin color and by analyzing the patient's feces, vomit, and urine were interpreted as the physical expressions of the disruption in the patient's bodily equilibrium that was occurring beneath the surface of the skin. In medical practice in Britain then, signs rather than causes differentiated one type of illness from another.[17]

On large sugar plantations where hundreds of enslaved African and Afro-Creole slaves resided and worked, the explanatory authority of humoral models of illness imperfectly explained the cause of an ailment, especially when *many* rather than one or two slaves sickened and produced the same symptoms simultaneously. In 1777, for example, Nevis witnessed the demise of around 300-400 slaves from diseases related to malnutrition.[18] On Parham, the Tudway family's sugar plantation in Antigua, one-tenth

[16] With the exception of practitioners who held appointments in the charity hospitals and infirmaries that developed in Britain's urban sites at mid-century. See Mary Elizabeth Fissell, *Patients, Power and the Poor in Eighteenth-Century Bristol* (Cambridge: Cambridge University Press, 1991); Susan C. Lawrence, *Charitable Knowledge: Hospital Pupils and Practitioners in Eighteenth-Century London* (Cambridge: Cambridge University Press, 1996); Günter Risse, *Hospital Life in Enlightenment Scotland: Care and Teaching at the Royal Infirmary of Edinburgh* (Cambridge, Cambridge University Press, 1986).

[17] Two ailments, plague and smallpox, stood out to eighteenth century people as distinctive diseases that were produced from external forces, the result of the historical circumstance that early modern people experienced these diseases not in isolation but usually as epidemics. Practitioners attributed variations in the intractability, duration, and violence of these distinctive diseases to the patient's unique physiology: her sex, diet, age, ethnic origin, place of habitation, and passions determined the way a distinctive disease manifested, its duration, and violence.

[18] Andrew O'Shaughnessy, *An Empire Divided, The American Revolution and the British Caribbean* (Philadelphia, University of Pennsylvania Press, 2000), 161.

of the slaves perished, mostly from dysentery, between June 1779 and September 1780.[19] The constancy of sickness on large plantations among slaves who held occupations that required similar levels of physical exertion enabled onlookers to downplay differences in the constitutions of individual slaves. Field slaves shared the same diet, worked in similar environments, and received the same rations in terms of the quantities of building supplies and textiles they were given. The Jamaican physician Samuel Curtin, for example, lumped all field hands into the general category of "negroes," for the analytical purposes of identifying the types of people susceptible to the intermittent fever. "I have not met among them ['negroes'] with a pure tertian intermittent in the whole of my practice, though white people have been affected with them," he wrote. "I have been informed by practitioners here of forty years experience," he elaborated, "that it is a rare occurrence among negroes." Curtin made an exception, however, for the group he described as "mulattoes and house-negroes," who did sicken with the intermittent fever. Curtin placed enslaved domestics and people of color in an analytical and physiological category distinct from enslaved field hands. Their vulnerability to the intermittent fever could be explained by the fact that they "live in the same manner as white people."[20] The manner in which Curtin differentiated enslaved domestics from field hands, on the basis of their manner of living, encapsulates the ways in which managerial staff and practitioners in the region sorted and grouped the physiologies of different types of laboring people. Similarities in their living conditions created physiological similarities

[19] Ibid., 162; Evidence of Dr. Adair, *Report of the Lords of the Committee of Council* (London, 1789), part 3, Antigua No.2 in Sheila Lambert, ed. *House of Commons Sessional Papers of the Eighteenth Century,* Vol. 69 (Wilmington DE: Scholarly Resources, 1975), 321, 326-333, 334-338, 342, 346-7.
[20] Dr. Samuel Curtin, "Observations on the Yellow Fever of the West Indies. Communicated to Dr. Duncan in a Letter from Dr. Samuel Curtin, Physician at Rio Bueno, in Jamaica," *Medical Commentaries…Collected and Published by Andrew Duncan*, 9 (1783-84): 236-240, quote p. 238-9.

among enslaved of the same rank, or so white managerial staff and practitioners maintained.

Managerial staff began to conceptualize enslaved people of the same rank as populations, a unit of people whose susceptibility to environmental and physiological causes of illness could be generalized for the entire group. Enslaved peoples' individual constitutions no longer explained the cause of illness, with some exceptions.[21] Managerial staff continued to distinguish between Africans who had recently arrived at an island and those who were seasoned—the groups of African slaves who had resided upon an estate for a period long enough for their bodies to adjust to the climate, disease environment, and working demands. And they sometimes held that Africans and Creoles (slaves born in the region) were also physiologically distinctive. But apart from distinctions between the newly arrived and the seasoned and the African and the Creole, the individual constitutions of enslaved people could no longer be counted on to explain why some slaves sickened whereas others did not. Imperatives associated with the necessity of curing enslaved patients in large numbers further encouraged white managerial staff to search out the causes of different ailments. In identifying the origins of a type of sickness, white managerial staff believed they could pinpoint a *specific* mode of cure—or a combination of formal medicines, dietary changes, and aerial therapies that would stop an ailment's progress, irrespective of particularities in the patient's age, sex, or ethnic origin. The scale and seriality of illness on large estates provided the materialist

[21] Rather differences in the individual constitutions of enslaved patients explained a disease's material attributes: why some types of slaves were more susceptible to particular disorders than others, and why some might experience a disorder of greater severity and longer duration.

underpinnings for the shift in medical thinking away from humors towards a more disease-oriented model.

The militarization of the West Indies between 1756 and 1815 provided agricultural society and urban practitioners with the investigatory practices necessary to identify disorders as discrete diseases and to differentiate them according to their environmental, physiological, and pathological causes. Anglo-French warfare and conflict in the West Indies during this period disgorged European-born soldiers and mariners into the region in the tens of thousands, catalyzing devastating epidemics.[22] Of the 8,437 soldiers sailing to the West Indies from Britain between October of 1776 and February of 1780, 931 (11%) died on the transports.[23] In the West India campaigns that occurred between 1793-8, one historian estimates that Britain lost 100,00 British soldiers and mariners, half of them to mortalities. The British Army's experiences with fevers during extended land campaigns and while on garrison duty generated new questions about the origins of tropical fevers and their pathological progress. Medical men working in military hospitals and attached to individual regiments in the East and West Indies created what Mark Harrison generalizes as a "distinctive literature of hot climates."[24] Analysis of the content of this West Indian corpus of medical writing reveals it was actually a literature of fevers, one in which authors questioned how to relate tropical fevers, taxonomically, to the fevers of temperate climates, which eminent medical men such as William Cullen, François Bossier de Sauvages, and Benjamin Rush had classified

[22] J.W. Fortescue, *History of the British Army,* Vol. 4 (London: Macillan, 1899), 325. For a reevaluation of Fortescue's calculations see David Geggus, "The Cost of Pitt's Campaigns, 1793-1798," *The Historical Journal,* 26 (1983): 699-706.
[23] P. Mackesy, *The War for America, 1775-1783* (Cambridge, MA: Harvard University Press, 1964), 526.
[24] Harrison, *Medicine in an Age of Commerce and Empire, Britain and its Tropical Colonies, 1660-1830,* 1-28.

in their medical nosologies (medical systems of classification). In struggling to determine the identity of the fevers they treated, military and naval medical men proffered an alternative framework for thinking about fevers from that taught in medical universities in Britain and North America. The interpretive grid that military medical men developed emphasized the importance of identifying the environmental, physiological, and pathological causes of sickness as a means to differentiate fevers from one another.

In the wake of the American Revolution, both metropolitan Britons and groups of Quaker activists in the new United States drew attention to mortality rates and suffering on plantations in the Greater Caribbean.[25] Anti-slavery writers spotlighted the human catastrophe taking place on British sugar estates and the failure of plantation populations to naturally reproduce. In 1787, in preparation for an impending Parliamentary inquiry into the conditions of slaves in the Caribbean, the members of the colonial assemblies in the British Caribbean organized questionnaires intended to take stock of the condition of slaves on plantations.[26] Whether directly or indirectly, this increased attention to mortality on estates among political men in the region encouraged military medical men who settled in the islands during peacetime as well as long-resident practitioners working in the island's ports to expand their focus from the fevers laying waste to regiments

[25] Christopher Leslie Brown, *Moral Capital: Foundations of British Abolitionism* (Chapel Hill: University of North Carolina Press, 2006), 333-390.

[26] The most extensive and well-researched scholarship on the West Indian Lobby, David Beck Ryden's *West Indian Slavery and British Abolition, 1783-1807* (Cambridge: Cambridge University Press, 2009) does not investigate the response of colonial office-holders in the Caribbean to metropolitan anti-slavery critique. But throughout 1786 and 1787, members of the Jamaican colonial assembly discussed the necessity of forming committees to investigate slave mortality on Jamaican estates in order to qualify some of the claims about slave mortality rates that anti-slavery activists in metropolitan Britain had submitted to members of Parliament. For the local response to anti-slavery critique see *Journals of the Assembly of Jamaica, From October the 19th 1784 to March 5th, 1791* (Jamaica: Alexander Aikman, 1804).

quartered in Caribbean port cities and in isolated garrisons to illness among plantation populations.

Fever outbreaks within over-extended regiments enabled these practitioners to study the effects of the tropical environment on poorly fed and overworked white soldiers and plantation populations constituted an intellectually viable point of comparison for these practitioners. Apart from their climate of origin, field slaves shared many of the same physiological features as white infantrymen whose bodies had been worn down by fatigue, exposure, and diet. Urban practitioners wrung information from the case studies that overseers, planters, and enslaved adepts relayed to them and collected anecdotal information from the paratextual materials of printed yellow fever texts and local pamphlets of extremely small run and of limited availability. The political economy of slavery had encouraged, since mid-century, plantation managerial staff to accrue working knowledge about the cause and cure of disorders common on plantations such as locked-jaw (neo-natal tetanus), venereal disease, yaws, and dirt-eating. In the late 1780s and early 1790s, these disorders exploded as items of discussion in the correspondence between medical men located in Caribbean port cities and physicians in the urban centers in North America and Britain.

Practitioners' intellectual labor to concretize disorders rampant among slave populations as discrete diseases appealed to three communities of readers and political actors throughout the Atlantic world. For absentee and resident planters as well as overseers, practitioners' insights held authority because their conclusions about the etiological origins of these diseases also dictated specific modes of treatment and promised to provide a replicable system for the management of illness on large estates.

Yet practitioners' case studies of different diseases also drew interest from medical men in Philadelphia, Edinburgh, and London because of the case studies' capacity to illustrate how the human frame responded to illness. Their writing featured individual patient case studies. The cases of individual slaves featured in practitioners' writing stood in as representative of the way illness would manifest among certain populations of laboring people: enslaved Africans and Afro-Creoles, whose bodies were worn down through deficiencies in diet and excesses in work and exposure but whose constitutions were also unbothered by the torrid climate. Lobbyists working to either bolster or dismantle the economic and political power of The West Indian Interest represented a third type of readership who found practitioners' work useful. In response to anti-slavery critique, for example, propagandists hired by the colonial assemblies of different West Indian islands pressed the printed reports and books authored of practitioners into service in defense of the plantation system. Indeed, the disputes between pro-and-anti-slavery forces' over the question of Britain's involvement in the transatlantic slave trade placed the disorders chronicled in print by practitioners up for scruntiny and analysis from a broader reading public. In debates over the violence of the West Indian plantation system, these disorders appeared as diseases whose form and virulence were unique to the Caribbean and perhaps more prevalent among plantation slaves than other occupational groups in the region.

The Material Conditions of Knowledge Making in the Greater Caribbean

In the wake of the Seven Years' War, military and naval medical men who had been in the West Indies produced a spate of texts and significantly elaborated on contemporaries' understanding of fevers. The ports in the Greater Caribbean were crucial

to these authors' claims. One reason that ports in the Greater Caribbean have been insufficiently appreciated as places for refining raw data is due to their absence of state-funded scientific societies, University medical libraries, and charity hospitals. These institutions traditionally function for historians of medicine as markers of an urban center's function in refining and analyzing data, specimens, and patient cases histories collected from colonial sites. Yet as the following pages will show, the proximity of three different labor regimes within one region and the abundance of sickly bodies and cadavers they produced, made for different types of medical knowledge making in the Greater Caribbean than scholars have yet to fully appreciate.

Eighteenth-century medicine derived its practices and axioms from theories that stretched backwards to classical antiquity. Though it might seem far-fetched to claim that printed and manuscript texts formed the cornerstone of clinical learning in the early modern period, in such a context, a library of medical books functioned, in the words of one historian of medicine, as an "essential medical workplace."[27] An institutional medical library like that erected by the College of Physicians in Philadelphia or the medical faculty at the University of Edinburgh, or, similarly, the personal library of the London-based naturalist Sir Hans Sloane, was an invaluable clinical resource. Medical libraries provided access to texts from the classical world, contemporary medical theses, periodicals, and small-run pamphlets amassed from Europe and its colonies. Their collections thus put medical students and instructors in direct contact with case studies that spanned the centuries and the globe. It is for this reason that historians of medicine use a large library and state or municipal-sponsored scientific institutions as benchmarks

[27] Mary Fissell, "Material Texts and Medical Libraries in the Digital Age," *RBM: A Journal of Rare Books, Manuscripts, and Cultural Heritage,* 15 (2014): 135-145, quote p. 136.

for a city's function as a center of calculation.[28] Philadelphia and Edinburgh both contained large, institutionally-based medical libraries. London contained the personal medical libraries of several eminent physicians and *the* medical regulatory body for physicians who wished to practice in Britain, The Royal College of Physicians. The city also boasted several state-sponsored arts, scientific societies, and hospitals. It is partly because of the existence of one or several of these elements of knowledge-collection, regulation, and learning in these three urban centers that scholars position these cities as the centers of medical learning and interpretation in the Anglo-Atlantic world during the eighteenth century.

Two prominent ports in the plantation societies of the Greater Caribbean—Charleston, South Carolina and Kingston, Jamaica—did not have University-based medical libraries and urban hospitals on a scale or sophistication anywhere near the three Anglophone cities listed above. By mid-century, however, Charleston and Kingston maintained print and manuscript cultures that were robust given the port's sizes.[29] Prior to

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[28] The concept of a center of calculation comes from Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network Theory* (Oxford, 2005), 178. But most scholars use this phrase to describe urban contexts in which knowledge is made. See for example how Sarah Knott uses the criteria of large libraries and a medical school to make the case for Philadelphia as a center of medical calculation in "The Patient's Case: Sentimental Empiricism and Knowledge in the Early American Republic," *William and Mary Quarterly*, 67 (October 2010): 645-677, p. 651. Other works invoking the presence of large libraries as a vital condition for urban knowledge-making include James Delbourgo, "Sir Hans Sloane's Milk Chocolate and the Whole History of the Cacao," *Social Text 106,* 29 (Spring 2011): 71-101, libraries discussed 83-85 and Lisa Rosner, *Medical Education in the Age of Improvement: Edinburgh Students and Apprentices, 1760-1826* (Edinburgh: Edinburgh University Press, 1991). Here I am suggesting that population density as well as other factors such as a port's interaction with the larger world of commerce might provide alternate means by how scholars measure a "center of calculation." For works that implicitly use these criteria but do not invoke this term see Deborah Harkness, *The Jewel House: Elizabethan London and the Scientific Revolution* (New Haven: Yale University Press, 2007), 15-57; Maria de Carvalho Soares, "African Barbeiros in Brazilian Slave Ports," in Jorge Cañizares-Esqguerra, Matt D. Childs, and James Sidbury, eds. *The Black Urban Atlantic in the Age of the Slave Trade* (Philadelphia: University of Pennsylvania Press, 2013), 207-232; James Sweet, *Domingo Álvares, African Healing, and the Intellectual History of the Atlantic World* (Chapel Hill: University of North Carolina Press, 2011), 73-102.

[29] Referring to the British territories in the Caribbean, one historian characterized eighteenth-century Jamaica as the "first center of printing in the West Indies." Roderick Cave, "Printing in Eighteenth-Century Jamaica," *The Library,* 33 (September, 1978): 187-206, quote p. 187.

the American Revolution, Charleston boasted the largest bookshop in colonial North America, Robert Wells' "Great Stationary and Book Store on the Bay."[30] In 1748, the elites of the port also instituted the third subscription library in colonial North America, the Charleston Library Society.[31] In 1789 the port's medical practitioners organized the Medical Society of South Carolina to compare case studies and purchase books.[32] During the last decade of the eighteenth century, at least five newspapers were printed on site. Kingston's print culture was slower to develop by comparison, but by 1790 there were at least two booksellers in the city who imported medical tracts and operated circulating libraries.[33] In addition, the city maintained a fairly large print culture as evidenced by its four newspapers printed on site. [34] The blue tint characteristic of the paper of many Kingston and Spanish-Town imprints also suggests that a paper-mill operated nearby, supplying blue-rag paper in times of scarcity.[35] Kingston's Humane Society, originally

[30] Walter B. Edgar, "The Libraries of Colonial South Carolina," (Ph.D. Dissertation, Columbia: University of South Carolina, 1969).
[31] James Raven, *London Booksellers and their American Customers: Transatlantic Literary Community and the Charleston Library Society 1748-1811* (Columbia: University of South Carolina Press, 2008).
[32] "Minute Book of the Medical Society of South Carolina, from Dec. 24 1789 thru June 5, 1810," Waring Historical Library, Medical University of South Carolina, Charleston, South Carolina.
[33] In his announcement of September 25, 1787 in an unknown Kingston newspaper, the bookseller and librarian David Bower threatened to pursue subscribers behind on their payments. See Bower's announcement cut out from a Jamaican newspaper and pasted in Edward Long Papers, *Add. Mss* 12, 404-6 British Library, London; Thomas Stevenson & Co.'s advertisement for their stationary store and circulating library reported the availability of Cullen's *Materia Medica,* Buchan's *Domestic Medicine*, *The Edinburgh Dispensatory*, Kealde's *Pharmacopoeia,* and Nicholson's *Chemistry*. See Thomas Stevenson & Co.'s advertisement in *Daily Advertiser,* (Kingston, Jamaica), Thursday May 13, 1790.
[34] These included *The Daily Advertiser, the Jamaica Gazette, The Kingston Journal and Jamaica Universal Museum,* and *The Royal Gazette.* For more on Jamaican newspapers see Roderick Cave, "Printing in Eighteenth-Century Jamaica," *The Library,* 33 (September, 1978): 187-206; Frank Cundall, *The Press and Printers of Jamaica prior to 1820* (Worcester, Mass: American Antiquarian Society Press, 1916): idem, *A History of Printing in Jamaica from 1717 to 1834* (Kingston, 1935).
[35] My claim that blue-rag paper indicates the existence of a paper mill in Jamaica is based on an in-person conversation with James Greene, Director of the Library Company of Philadelphia. For examples of Kingston imprints published on blue-rag paper see Thomas Dancer, *Brief History of the Expedition to San Juan* (St. Jago de la Vega, 1781); idem, *The Medical Assistant* (Kingston: Alexander Aikman, 1801); Colonel Gillespie, *A General Outline of the Standing Orders and Regulations to be Observed by the XX Light Dragoons, Whilst in Jamaica* (St. Jago de La Vega: John Lunan, 1800).

formed for the resuscitation of the nearly drowned, functioned like many other medical societies throughout the Atlantic world: its members met regularly to share and study the unusual medical phenomena they observed and collected.[36] The Society's officers subscribed to medical journals, acquired apparatuses, instruments, and electrical machines on behalf of its members.[37]

The pleas that urban practitioners throughout the Greater Caribbean made to friends and associates in Philadelphia, London, and Edinburgh for medical books, theses, and manuscripts nevertheless hint at the difficulties acquiring printed medical materials during a half-century where the region's contact with the larger Anglophone world was limited by war and trade embargoes. The last two decades of the eighteenth century represents a period of frustrated ambitions for West Indian medical men: yellow fever epidemics accelerated the publication of medical texts in the ports it ravaged in North America and the Caribbean while war and quarantine hindered the circulation of these texts to and within the region.

The Philadelphia physician and fever theorist Benjamin Rush, for example, received requests from West Indian practitioners seeking printed and manuscript materials that they believed would better assist them, comparatively, in understanding the

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[36] For more on The Humane Society of Jamaica's parent organization, the Royal Humane Society of London see Luke Davidson, "Raising up Humanity: A Cultural History of Resuscitation and the Royal Humane Society of London," (Ph.D. Dissertation, University of York, 2001). On the relationship between The Royal Humane Society of London and its numerous colonial branches see Amanda Moniz, "'Labours in the Cause of Humanity in Every Part of the Globe': Transatlantic Philanthropic Collaboration and the Cosmopolitan Ideal," (Ph.D. Dissertation, University of Michigan, 2008), 239-287.

[37] Founded by the port's physicians in 1789 to resuscitate drowning victims, the Humane Society operated on the subscriptions of its members and support from the Royal Humane Society of London. Members paid one guinea annually. For a recapitulation of the Society's activities and funding sources see James Walker's essay in *The Royal Gazette,* Kingston, (Jamaica), August 16-23, 1794. For a description of the Kingston Medical Society, which grew out of the Jamaica Humane Society, "in consequence of a malignant fever which raged in 1793 and 1794 and baffled the power of medicine for many months," see *The Jamaica Almanack and Register calculated to the Meridian of the Island for the year of our lord 1796* (Kingston, Printed by David Dickinson for Thomas Stevenson, 1797), 5.

behavior of disease in the tropical zone. In 1784, the Jamaican James Shackleford wrote to Rush to "acknowledge the receipt of your favor accompanying the little essays you was so kind to honor me with for Dr. Dancer," [Thomas Dancer, then physician to the hospital for invalids in Bath, Jamaica].[38] The highly-regarded Jamaican physician Francis Rigby Brodbelt, a member of the Jamaican Assembly, frequently turned to Rush, a former classmate at the University of Edinburgh, to supply him information and Rush's own interpretation of the yellow fever of Philadelphia. Rush's views, as Brodbelt expressed, was crucial for the Jamaican physician's own comprehension of fever in Jamaica. "Since your arrival in Philadelphia, you have published two or three little matters, which I'll trouble you to procure and send them to me…I could also wish to have a thesis of yours which was published when you graduated," he wrote on the eve of the American Revolution.[39] Over twenty years later, in 1795, Brodbelt's efforts to classify the fevers then ravaging Jamaica were frustrated by the slow arrival of merchant ships from London. "The fever which made such devastation in your city has prevailed here very much, but I have the satisfaction to say that I had great success in restoring very many to good health who labored under that disease by pursuing your excellent practice," he wrote to Rush. Brodbelt sought a copy of Rush's (1793) pamphlet *An Account of the Bilious Remitting Yellow Fever*, a tract that Brodbelt's maintained was indispensable for his identification of the Jamaica iteration of the disease. "I think," Brodbelt speculated, "it comes nearest to the synochus of Cullen." But Brodbelt could not, without Rush's

[38] James Shackleford, Kingston, to Benjamin Rush, January 29, October, 1784 in Rush Family Papers MS, Rush Correspondence, Vol 25, f. 107, Historical Society of Pennsylvania, Philadelphia, PA (Hereafter Rush Correspondence).
[39] Francis Rigby Brodbelt, Spanish Town, Jamaica, to Benjamin Rush, Philadelphia, February 28, 1773, Vol 25, f. 68, Rush Correspondence.

printed essay, be sure. "I have not yet been able to procure your pamphlet on this fever, but collected your mode [of treating it] from the American Papers, however I hope the first arrivals from London will bring your treatise to me" he closed.[40]

The desperation of a young South Carolinian medical apprentice, Francis Brunmitt, also underscores the importance of books for medical knowledge-making. Brunmitt had worked under Doctor George D. Phillips in Columbia but had to leave his mentor after a year, because, as he wrote in a letter to Rush begging him to take him on as a student, "he [Phillips] had not a sufficient library for me to read.[41] Instances of insufficient access to books and pamphlets of small run illustrate the realities of medical knowledge-making in the Greater Caribbean's plantation societies, where the region's geopolitical importance often hindered resident practitioners' participation in conversations and debates occurring on the North American mainland and the British Isles.

The proximity of West Indian plantations to British Military headquarters in Bridgetown, Barbados and Fort Augusta and Port Royal, Jamaica, the frequent interactions of large estates with fortified refuges in the mountains of Antigua, Dominica, Grenada, St. Kitts, St. Lucia, St. Vincent, Trinidad and Tobago, and, in Jamaica, coffee plantations' proximity to the military barracks in Maroon Town and Up Park Camp made plantation societies laboratories for studying how *working* people's bodies responded to environmental and physical duress. After 1763, all of these military sites were manned by companies comprised of regular soldiers. A force of 3,000 was initially dispensed to the

[40] Francis Rigby Brodbelt, Spanish Town, Jamaica to Benjamin Rush, Philadelphia, January 6, 1795, Vol 28, Rush Correspondence.
[41] Francis S.R. Brunmitt, Fairfield District, South Carolina to Benjamin Rush, Philadelphia, June 8, 1812, Box 3, f. 36, Rush Correspondence.

Garrison in 1763 and the number of soldiers in the West Indian garrison ballooned thereafter, peaking in 1795 with 22,000 soldiers.[42] The abundance of infantrymen who often sickened upon arrival allowed urban practitioners to compare how infantrymen and field slaves responded to the West Indian environment and the frequency with which they experienced illness.

Medical men and laypeople in the region compared the environmental and physiological similarities and differences of slaves, sailors, and infantrymen. Many practitioners noted that plantation slaves, mariners, and infantrymen alike experienced scanty provisions, ill-fitting or insufficient clothing issues and excessive amounts of hard labor. The three groups were also likely to have spent many hours in inclement or excessively hot weather. They were also given to bouts of intemperance. In lieu of thinking about illness as the product of dysfunction within the individual patient's body—attributable to their unique humoral arrangement—students of disease began to identify the shared habits and occupational demands that had molded laboring people's bodies in physiologically similar ways. Because infantrymen's, sailors' and slaves' diets, lapses in hygiene, intemperance, and overexertion seemed similar across the three groups, one could assume, this reasoning went, that they had similar physiologies as groups or populations. This analytical maneuver lays bare how the co-existence of three different working groups in the Greater Caribbean facilitated knowledge-making about the physiological and environmental origins of illness. Ideas about race and immutable bodily differences played a less determinative role in the evolution of ideas about disease

[42] Between 1794-1806 the size of the West Indian Garrison averaged around 18,000 men. Rodger Norman Buckley, *The British Army in the West Indies: Society and the Military in the Revolutionary Age* (Gainesville: University Press of Florida, 1998), 85.

causality, I argue, than the scholarship on race and disease in the early modern period has claimed.[43] A careful analysis of eighteenth-century writing on epidemics in the Caribbean shows that most people in the Caribbean, even medical men, thought about bodily difference through physiology or constitutions. Constitutions—in the thinking of most Europeans and colonists were not inherited but formed—a person's constitution was the cumulative result of his or her daily routines and chronic habits.[44] Physiological understandings of health and illness were more prominent explanations for differential susceptibility to illness than race because they fit with early modern ways of interpreting health and illness: which held *habits*, practiced over a lifetime, determined a person's constitution and their susceptibility to different types of illness.

Practitioners did, however, take advantage of the perceivable variation in the vulnerability of these three different occupational groups to certain types of fever. But their explanations do not follow traditional arguments about the emergence of race. The differential susceptibility of sailors and field slaves to what Henry Warren classified as the malignant fever of Barbados at mid-century, offered Warren a window into the nature

[43] Joyce Chaplin, "Natural Philosophy and an Early Racial Idiom in North America: Comparing English and Indian Bodies," *William and Mary Quarterly,* 44 (1107): 229-52; Margot Minardi, The Boston Inoculation Controversy of 1721-1722: An Incident in the History of Race," *William and Mary Quarterly,* 61 (2004): 47-76; Christine Bolt, *American Indian Policy and American Reform: Case Studies of the Campaign to Assimilate the American Indians,* (London, 1987), 25.

[44] Fever writers, it is true, thought that removal from a familiar to an alien climate could produce physiological stress that made a person more susceptible to illness. It is for this reason that many political lobbyists advocating for African-based military regiments and the perpetuation of African-slavery argued that Africans were less vulnerable than Europeans to the disorders endemic to the Caribbean because, as these writers argued, the climate of the Caribbean and that of African was similar. Africans, in this type of thinking, did not suffer from the disturbances associated with rapid dislocation from a familiar to alien environment. Few medical writers, however, would have argued that the similarities in air and humidity of the Greater Caribbean and that of coastal Africa meant that Africans and Afro-Creoles were, *naturally* (that is, by nature—or by inheritance) better suited to work in the region because they were constitutionally distinctive and thus enjoyed greater health. The reason for the absence of this argument in the medical literature is because medical writers did not believe that constitutions were produced by climate alone, nor did they hold that constitution/physiology was hereditary.

of the fever under study—its origins, whether it contaminated, and how it did so. Sailors, he wrote, “have perhaps less conduct in their way of living than any sett of people in the world, drinking ever hard of the vilest and cheapest strong liquors when ashore, and then going off upon the water with breasts open, and their bodies poorly covered, even in the night,” he observed.[45] Warren noticed that slaves did not sicken with fever. And he struggled to explain the absence of this fever among slaves because slaves were, he assumed, subjected to similar physical hardships that beset sailors. Slaves were, he wrote, as intemperate and indiscriminate in their diets as their sea-bound counterparts. “How comes it that the negroes," Warren asked, "whose food is mostly rancid fish or fleshy, nay often the flesh of dogs, cats, asses, horses, rats &c who mostly lead very intemperate lives, and who are always worse clad, and most exposed to surfeits, heats, colds, and all the injuries of the air, are so little subject to this danger?” [46]

The diet, fatigue, and lapses in hygiene and self-care that characterized the lives of sailors and slaves had created, in Warren's reasoning, similar physiological vulnerabilities in both groups, which would suggest that both occupational groups should fall prey to fevers lurking in the atmospheric environment of Barbados. But slaves did not sicken with the malignant fever in equal measure. Their indifference to the malignant fever showed, Warren reasoned, that the malignant fever originated in the air of foreign ports with which sailors alone had contact, rather than noxious vapors and bad air endemic to the island. Warren’s explanation for why sailors sickened with the fever under examination but slaves did not encapsulates the way that he and other fever analysts

[45] Henry Warren, *A Treatise Concerning the Malignant Fever in Barbados and the neighboring islands; with an account of the seasons there, from the year 1734 to 1738* (London, 1741), 20-22.
[46] Ibid., 14.

made use of the co-existence of three laboring populations within the region to draw conclusions about the identity and origins of different fevers they studied.

The methods that fever writers used to infer the causes of different fevers created a set of tools for investigating and rationalizing the origins of other non-febrile ailments. This toolbox could even explain those ailments which seemed contagious because of their rapid and extensive spread. Plantation slaves became, in the writing of many fever authors, comparative subjects that authors set against well-known chronicles of epidemic fevers among specific regiments and naval vessels. The assumption that the three populations were physiologically similar threw into sharp relief the effect that small differences within each group's habits—their diets, sleeping environments, and the absence or prevalence of physiological stress that accompanied their dislocation from a temperate to a torrid climate—had in making some groups more vulnerable to epidemic disorders.

Some disorders, such as scurvy or dirt-eating, were understood to be the product of dietary deficiencies, whereas other ailments were thought to be brought about by a person's exposure to noxious vapors (miasma) that were endemic to a particular island or to a specific microclimate or within it. One difference that distinguished infantrymen and the crews of Royal Naval vessels from plantation slaves was physiological burdens that the first two groups experienced as a result of their hasty relocation from their native, temperate environment to the new and unfamiliar torrid climate of the West Indies. Many fever writers attributed infantrymen's susceptibility to fevers as the product of a phenomenon I here refer to as "bodies out of place." The Hippocratic idea held that people's bodies were molded by the air, water, and soil of their native environment and

existed in harmony with them. Humoral balance and health was sustained by living in a climate similar to the one in which a person had been reared or lived for a long period of time. When changing habitations, humans experienced health [they sustained their humoral equilibrium] when they lived in an environment similar to the one to which they were accustomed. When people moved to different climates, their bodies became physiologically stressed.[47] The disruption that came with the movement from one climate to another did not produce a new illness directly, but it could make a person's constitution less robust and rendered the newcomer susceptible to the disorders endemic to a particular place or to those brought about by poor diets, intemperance, and overwork.

A charnel house for newcomers, the Greater Caribbean's ports and places became a research space in which practitioners studied the physiological effects of "bodies out of place." After 1740, both the slave trade and Anglo-French warfare in the region displaced Africans, British soldiers, and recently impressed sailors from their native environments in Britain and Africa and dumped them into ports like Charleston, South Carolina, St. George's, Grenada, and Kingston, Jamaica in the tens of thousands. Movement within the region between microclimates could also produce illness. This assumption was backed up, for example, by grisly scenes reported from the frontlines of Anglo-French conflict. When the Spanish regiment of Léon, comprised of 1,440 men accustomed to the climate of Santo Domingo crossed, in 1782, into St. Domingue, the regiment lost 667 men within the first three months due to disease-related mortality. Officers and regimental physicians attributed the ghastly mortality rates they witnessed to the sudden change in climate the

[47] Karen Kupperman, "Fear of Hot Climates in the Anglo-American Colonial Experience, *William and Mary Quarterly*, 41 (1984): 213-40; Sean Morey Smith, "Seasoning and Abolition: Humoral Medicine in the Eighteenth-Century British Atlantic, *Slavery and Abolition,* 36 (2015), online edition.

regiment had experienced.[48] Practitioners and ordinary observers used the devastation among newcomers or groups moving between microclimates to speculate on how human bodies responded to relocation from their native environments.

The pandemonium that yellow fever epidemics created also enabled the pursuit of post-mortem dissections of its victims in significantly larger numbers in the West Indies than was possible elsewhere. By the late eighteenth-century, dissection was beginning to gain authority as the way to definitively classify a particular type of disorder because it allowed one to determine the clinical origins of an ailment. More specifically, dissections allowed onlookers to link the abnormal appearance of a cadaver's individual organs or specific systems with symptoms that had been observed at the patient's bedside. Kingston, Jamaica and St. George, Grenada became two centers of medical interpretation in the Anglophone Caribbean due to the abundant opportunities that military men maintained to disinter the bodies of infantrymen who died in the islands' military hospitals. It is extraordinarily difficult to quantify the number of dissections that occurred in the Greater Caribbean during the last two decades of the eighteenth century because many medical writers who dissected numerous cadavers selected and wrote about exemplary case studies. Most medical writers referred to the "several" bodies they opened up, or "the subjects," or referred in passing to the "number of dissections performed."[49] A survey of five different fever authors writing between 1780 and 1800

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[48] Francisco Guerra, "The Influence of Disease on Race, Logistics, and Colonization in the Antilles," in Kenneth Kiple, ed. *Biological Consequences of the European Expansion 1450-1800* (New York: Routledge, 1997), 161-172, 167.

[49] "Upon dissection," appears in George Davidson, St. Vincent to Benjamin Rush, July 22, 1796 in Vol. 37, Rush Correspondence; "several," in George Davidson, "Article III: Observations on the Yellow Fever, and its Proximate Cause," *The Medical Repository of Original Essays and Intelligence, Relative to Physic, Surgery, Chemistry,* 1 (Nov. 1, 1797):165-171, p. 166; Robert Jackson, *A Treatise on the Fevers of Jamaica* (London, 1791), "in several persons," p. 264; William Lempriere, *Practical Observations on the Diseases of the Army in Jamaica* (London, 1799), "the soldiers," p. 104; Hector McLean*, An Enquiry into the*

who did give an exact count, yields thirty-three dissections. Of this group thirty-two of the cadavers had been soldiers, one was that of a white nurse.[50] Slaves were dissected, but less often than soldiers and sailors. Between July and December in 1789, the Dominican plantation surgeon Jonathan Troup recorded in his journal six dissections he performed on slaves from different plantations in the island.[51] As was the case with medical men writing about the dissection of soldiers and sailors, authors writing the bodies of slaves frequently held up an individual case study for examination and then referred to the rest of their dissections in the abstract, without specifying the quantity.[52]

Although the quantity of dissections discussed above pales in comparison to the amount undertaken in Parisian hospitals for the poor, this estimate dissertation has provided about the frequency of dissection is incomplete due to the types of sources I have examined and the ways in which dissections entered into the historical record. Practitioners' case studies were written retrospectively and they choose exemplary dissections selectively for particular ends: to illustrate a principle explained in their larger

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Nature, and Causes of the Great Mortality Among the Troops at St. Domingo: with the Practical Remarks on the Fever of that Island (London, 1797), "the subjects," p.33. Solomon De Monchy, *An Essay on the Causes and Cures of the Usual Diseases in Voyages to the West Indies,* (London, 1762), p. 42, 46, 47. John Williams and Parker Bennett, *Essays on the Bilious Fever of Jamaica* (London, 1752), "in the subjects dissected," p. 12; William Wright, "Practical Observations on the Treatment of Acute Diseases; particularly those of the West Indies," *Medical Facts and Observations*, 7 (1797): 1-28, "several," p. 22.

[50] Robert Adair, "An Account of the Dysentery, as it Appeared Among His Majesty's Troops in Jamaica During the Late War," *The London Medical Journal* (1786): 345-355, soldier p. 348, nurse p. 349; Colin Chrisholm, "History of an Uncommon epidemic fever observed in Grenada," *Medical Commentaries for the year 1794*, 3 (1794): 267-293, 6 soldiers discussed p. 284-6; John Dryden, "An Account of a Rupture of the Esophagus, from the action of vomiting," *Medical Commentaries for the year 1789 Decade Second*, 3 (1789), "the soldier," p.311; David Grant, "A Newcomer," in *Febre Flava* (Jamaica, 1805), 40; John Hunter cited 23 officers and soldiers dissected after the Cartagena invasion in *Observations on the Diseases of the Army in Jamaica* (London 1796), 160; John Lining, "One lad," in *Essays & Observations, Physical and Literary Read Before a Society in Edinburgh*, 2 (1756): 370-395; quote p. 371.

[51] Journal of Jonathan Troup, July-December, 1789, MS 2070, University of Aberdeen Special Collections and Archives, Aberdeen, Scotland (Hereafter Troup MS).

[52] Colin Chrisholm, "Observations on the Influenza as it lately appeared in the West Indies," *Medical Commentaries for the year 1791*, 5 (1791): 325-354, dissections p. 339-49; William Chamberlaine, *A Practical Treatise on the Superior Efficacy of Stizolobium or Cowage* (London, 1804), 34.

article; to support a known outcome; to disprove previous or competing theories. These circumstances not only determined which dissections were written about, they circumscribed the amount recorded. Given these conditions, it seems fair to argue that the number of dissections performed in the Greater Caribbean on soldiers, sailors, and slaves during the period under study is far greater than what comes through in this dissertation's survey of articles appearing in medical journals and case studies found in the correspondence of intellectually and politically prominent medical men. Archival research into regimental officers' and surgeons' reports, written in response to governmental efforts to improve mortality rates in tropical theaters of warfare, will yield a more robust and accurate picture of the frequency and quantity of dissections undertaken in the Caribbean during this period. But the point still holds. The fact that fevers as well as other disorders in the region killed multitudes of anonymous European and African newcomers of varied legal status transformed ports in the Greater Caribbean from their positions as sites for the accumulation and trans-shipment of exotic botanical specimens collected from the islands' interior forests into spaces where clinical learning and the degradation of the poor and enslaved people's remains were of a piece.

The importance of dissection for making authoritative medical claims is exemplified in The Humane Society of Kingston's ascent in Jamaica's internal debates over yellow fever. The Society monopolized the authority to determine the identity and essential characteristics of yellow fever in Jamaica because its members commandeered the resources necessary to pathologically investigate many of the island's fever cases. James Walker, the Society's secretary acquired corpses from patients who had died in the hospital. Between June and August of 1794, the members of the Society opened up

seven yellow fever cadavers. On the basis of their investigations of one of the cadaver's heads, the Society issued a statement to the Jamaica newspapers, classifying the 1794 fever as a bilious rather than an inflammatory malady, and thus treated with the use of calomel, rather than bloodletting. "Nothing appeared in the head to create a supposition of fullness or inflammation," Walker reported in the newspaper.[53] The abundance of dead sailors and soldiers in the region enabled post-mortem dissections to occur with a frequency that did not occur elsewhere in the Anglophone Atlantic World until the middle of the nineteenth century.

Epidemics devastated British imperial ambitions and frustrated commercial enterprises. Many disorders wrought havoc upon groups of people, namely, slaves, soldiers, and sailors, who, in the Greater Caribbean, possessed limited legal rights. This combination augmented the scientific function and status of the region. Widespread sickness produced corpses available for dissection from infantrymen and naval sailors with families living too distant to reclaim them or protest the fate of their kin's remains. The indeterminate legal status of bondspeople's remains and the correlation with some plantation diseases, such as dirt-eating, with criminal activities, often made the bodies of enslaved patients who died during an epidemic available for post-mortem dissections. The Greater Caribbean's plantation societies—their large estates and port cities—lacked large collections of printed texts, and yet they made up for this deficiency with oral, eyewitness, and manuscript sources of medical oddities, observations, as well as copious opportunities for post-mortem investigations.

Historiography

[53] James Walker, *Royal Gazette*, August 8-15, 1794.

This dissertation builds upon the work of two types of historical scholarship: the history of Atlantic Science and the history of the patient.

Over the past decade, scholars of medicine and science in colonial North America have taken up the Atlantic History project of challenging static, nationalist-driven frames of analysis by emphasizing the movement of the ideas, objects, and people across regional and political boundaries within the Atlantic basin. Scholars challenged extant hierarchies of interpretation that had characterized the division of intellectual labor in the metropole and colonial periphery as that of "colonial collection and European deliberation," and instead asked how encounters between Europeans, First Nations, and Africans in the Atlantic basin produced new scientific and medical knowledge.[54] For plantation societies, Atlantic Science established that the transoceanic exchange of plant specimens between British colonial naturalists and metropolitan taxonomists in London introduced African therapeutics into British pharmacopeias. Such circulations, scholars contended, brought previously distanced modes of natural inquiry into contact with one another and gave rise to new networks of knowledge exchange. Positioning white colonial actors and their African informants as important contributors to European medical knowledge, these scholars rerouted the geography of knowledge-making that had dominated earlier scholarship on science and medicine in the early modern era, which had posited that knowledge travelled from urban centers in Europe and Britain to colonial recipients in the Americas.[55] Rather than seeing scientific knowledge as something

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[54] James Delbourgo, "Sir Hans Sloane's Milk Chocolate and the Whole History of the Cacao," *Social Text 106,* 29 (Spring 2011): 71-101, quote p. 71.

[55] The literature incorporating the Atlantic world in the analysis of early modern science and medicine is large and rapidly expanding. A good overview is the edited collection by James Delbourgo and Nicholas Dew, *Science and Empire in the Atlantic World* (New York: Routledge, 2008). See also Antonio Barrera-Osorio, *Experiencing Nature: The Spanish American Empire and the Early Scientific Revolution* (Austin: University of Texas Press, 2006); Jorge Cañizares-Esguerra, *How To Write the History of the New World:*

created and then transferred, they argue that knowledge is produced *in movement*, that the practice of circulation was critical to the development of new ways of knowing about the natural world.

In its study of medical ideas and encounters Atlantic Science produced scholarship on the circulation of therapeutic information, botanical specimens, and curiosity objects across transatlantic patronage networks. Because the literature of medicine in the Atlantic world has been so concerned with movement of medicinal plants and ideas about their properties across the Atlantic basin, scholars have rarely considered the ways in which the specific physical and social topographies within different colonies and regions shaped the way that actors—as bystanders, sufferers, and healers—participated in generating and reshaping ideas about the human body within their immediate locales. In overlooking the distinctive investigative spaces of ports, plantations, and garrisons, forests, and littorals, work on medical encounters within the broad field of Atlantic Science tended to position these sites as generic nodes within broader and very complex transatlantic systems of information exchange.[56]

Histories, Epistemologies, and Identities in the Eighteenth-Century Atlantic World (Stanford, CA: Stanford University Press, 2001); Joyce Chaplin, *The First Scientific American: Benjamin Franklin and the Pursuit of Genius* (New York: Basic Books, 2006); James Delbourgo, *A Most Amazing Scene of Wonders: Electricity and Enlightenment in Early America* (Cambridge, Mass., Harvard University Press, 2006); Sara S. Gronim, *Everyday Nature: Knowledge of the Natural World in Colonial New York* (New Brunswick, N.J., 2007); Londa Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (Cambridge: Cambridge University Press, 2004).

[56] Jana Cerná, "A Powerful Antidote, a Strange Camel, and Turkish Pepper: Iberian Science, and the Discovery of the New World in Early Modern Czech Lands," in *Early Science and Medicine,* 21 (2016): 214-241; Christopher Parsons, "The Natural History of Colonial Science: Joseph François Lafitau's Discovery of Ginseng and its Afterlives," *William and Mary Quarterly,* 73 (2016): 37-72; Kathleen S. Murphy, "Translating the Vernacular: Indigenous and African Knowledge in the Eighteenth-Century British Atlantic, *Atlantic Studies,* 8 (2011); Susan Scott Parrish, *American Curiosity: Cultures of Natural History in the Colonial British Atlantic World* (Chapel Hill, N.C. University of North Carolina Press, 2006); Martha Robinson, "New Worlds, New Medicines: Indian Remedies and English Medicine in Early America," *Early American Studies,* 3 (2005): 94-110.

The challenges to nationalist-driven geographies proffered by Atlantic History informed the scale in which scholars of Atlantic Science worked and the questions they pursued. Their efforts to unseat imperialist histories of scientific knowledge have significantly augmented our understanding of the various participants in the study of the natural world. This dissertation, however, consciously moves away from this older framework, which has continued to determine the scale in which practitioners of Atlantic Science work. The circulatory model of knowledge-making that is at the core of this older model of Atlantic science and medicine also insists that ideas develop through transfer rather than somatic experience. The production of knowledge about disease and the human body was anything but disembodied; it is a phenomenon necessitating scrutiny of the specific spaces and relationships that determined how historical actors thought about and experienced illness and its treatment. In colonies organized around the political economy of slavery and warfare, medical knowledge-making is a process whose richness is insufficiently captured by looking at the exchange of medicinal plants across transatlantic botanist networks.[57] In focusing on colonies connected through their common experiences with the political economy of slavery, warfare, and tropical disease this project narrows in on the localized spaces and geographical axes that were of greatest relevance to the historical actors analyzed here.

[57] This project's interest in particular intra-Caribbean axes of knowledge-making and movement takes its inspiration from the routes of information and culture analyzed in the following: Julius S. Scott, "The Common Wind: Currents of Afro-American Communication in the Era of the Haitian Revolution," in Laurent Dubois and Julius Scott, eds. *Origins of the Black Atlantic: New Histories* (New York: Routledge University Press, 2010); Philip D. Morgan "Lowcountry Georgia and the Early Modern Atlantic World, 1733-c.1820 in Morgan, ed. *African American Life in the Georgia Lowcountry: The Atlantic World and the Gullah Geechee* (Athens, GA: University of Georgia Press, 2010); Christopher Iannini, *Fatal Revolutions: Natural History, West Indian Slavery, and the Routes of American Literature* (Chapel Hill: University of North Carolina Press, 2012).

Instead of ranging far and wide, I draw methodological inspiration from scholarship on science and medicine in early modern Europe. As of late, this field has been rematerialized with scholarship that investigates the relationship between the organization of experimental, domestic, and commercial space and the remit of the different occupational groups working and residing within these places to claim knowledge about the operation of the natural world.[58] Medical knowledge making in this context requires an examination of plantation hot-houses (slave hospitals), military hospitals, and army barracks. Instead of ranging far and wide, I ground my analysis of medical knowledge-making in the particularities of plantation slavery in the British Caribbean. This approach better attends than previous work to the relationship between

[58] For a theoretical overview of the spatial components of scientific investigation see David Livingstone, *Putting Science in its Place: Geographies of Scientific Knowledge* (Chicago: University of Chicago Press, 2003). For a general overview of the spaces of early modern natural inquiry see Lorraine Daston and Katherine Park, eds. *The Cambridge History of Science: Volume Three: Early Modern Science* (Cambridge: Cambridge University Press, 2006), Part II, "Personae and Sites of Natural Knowledge"; On courts, patronage networks, and monarchical ambitions in shaping the focus of early modern natural philosophy see: Mario Biagioli, *Galileo, Courtier: The Practice of Science in the Culture of Absolutism* (Chicago: University of Chicago Press, 1993); William Eamon, "Court, Academy, and Printing House: Patronage and Scientific Careers in Late Renaissance Italy," in Moran, *Patronage and Institutions: Science, Technology, and Medicine at the European Court, 1500-1750* (Rochester, NY: Boydell, 1991), 25-50; Pamela Smith, *The Business of Alchemy: Science and Culture in the Holy Roman Empire* (Princeton: Princeton University Press, 1994). On the household as a site of investigation with specific social hierarchies see Deborah Harkness, "Managing an Experimental Household: The Dees of Mortlake and the Practice of Natural Philosophy," *Isis,* 88 (1997); Steven Shapin, "The House of Experiment in Seventeenth-Century England," *Isis,* 79 (1988): 373-404. On Museums: Paula Findlen, "Masculine Prerogatives: Gender, Space, and Knowledge in the Early Modern Museum," in Peter Galison and Emily Thompson, eds. *The Architecture of Science* (Cambridge, MA: MIT Press, 1999). On Neighborhoods: Adrian Johns, *The Nature of the Book: Print and Knowledge in the Making* (Chicago: University of Chicago Press, 1998). On laboratories Steven Shapin and Simon Schaffer, *Leviathan and the Airpump: Hobbes, Boyle, and the Experimental Life* (Princeton: Princeton University Press, 1985); On libraries and influence of the library at Edinburgh in the education and dissertations of the University's medical students see Lisa Rosner, *Medical Education in the Age of Improvement*: *Edinburgh Students and Apprentices, 1760-1826*. Studies: Dora Thornton, *The Scholar in his Study: Ownership and Experience in Renaissance Italy* (New Haven: Yale University Press, 1997); Steven Shapin, "The Mind is its own Place: Science and Solitude in Seventeenth-Century England," *Science in Context,* 4 (1990): 191-218; For an excellent analysis of space and knowledge in an early American study see Wilson H. Kimnach and Kenneth P. Minkena, "The Material and Social Practices of Intellectual Work: Jonathan Edward's Study," *William and Mary Quarterly,* 69 (2012): 683-730. Neil Safier's, *Measuring the New World: Enlightenment Science and South America* (Chicago: University of Chicago Press, 2008), is exceptional in its focus on the spatial components, itineraries and observatories in particular, of Atlantic knowledge-making.

the organization of labor, interracial strife, and patient-practitioner encounters in the region in the ensuing ideas about the body. As significantly, this framework brings to our attention a welter of previously unrecognized actors—overseers and attorneys, enslaved patients, and plantation surgeons—that the literature does not traditionally consider participants in knowledge making. Although scholarship has positioned these groups as unquestioning recipients of therapeutic claims that scientific elites/botanists and their African collaborators produced, these groups of middling whites and enslaved people, I argue, functioned as modifiers and creators of new ideas about how disorders operated in the torrid environment and the therapeutics and strategies of body management best suited to treat them.

In this way the project builds upon the insights that historians of medicine in early modern Europe have made by examining medicine from the patient's perspective. This literature, developed by historians of medical practice, positions patients as vital agents in the genesis of new medical knowledge. Patients' navigation of diverse medical marketplaces—both in their immediate locales and in print—generated consumer-based medical knowledge. I adapt the model of the medical marketplace to the distinctive agricultural slave economies of the plantation Caribbean. The original model, developed in the historical analysis of practitioners in early modern Britain, emphasizes the choices available to patients and stresses that patients' ability to choose between different practitioners drove the development of medical knowledge and different systems of care.[59] This project elaborates the medical marketplace model by showing how non-urban

[59] For canonical work on the early modern medical marketplace see Lucinda Beier, *Sufferers and Healers: The Experience of Illness in Seventeenth-Century England* (London: Routledge and Kegan Paul, 1987); Harold Cook, *The Decline of the Old Medical Regime in Stuart London* (Ithaca: Cornell University Press, 1986); Mary E. Fissell, *Patients, Power, and the Poor in Eighteenth-Century Bristol* (Cambridge:

and non-free patients shaped the ways in which these groups engaged different healers and practitioners.[60]

Enslaved patients and white managerial staff, I show, generated consumer intelligence by gathering and replicating information about the competencies of different practitioners, apothecaries, midwives, and irregular healers they encountered. "Old Daphne not good for much," the overseer, Thomas Thistlewood, of the Egypt estate in Westmoreland, Jamaica wrote after four children died in births that she had attended.[61] Enslaved people had less agency than infantrymen and sailors in determining the types of healers they consulted. And yet as the comments of plantation surgeons make clear, enslaved patients' opinions could determine a plantation surgeon's employment. "The negroes in general are remarkably sensible and if you are successful they will sound your praise, give them little pain," the Dominican plantation surgeon Jonathan Troup reminded himself in his medical memorandum book.[62] Both slaves and managerial staff then, organized and modified observations on the efficacy and effects of different medicaments

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Cambridge University Press, 1991); Mark Jenner and Patrick Wallis, eds., *Medicine and the Market in England and its Colonies, c. 1450-c.1850* (Houndmills: Palgrave Macmillan, 2007); Elaine Leong, "Collecting Knoweldge for the Family: Recipes, Gender and Practical Knowledge in the Early Modern English Household," *Centaurus* 55 (2013): 81-103; N.D. Jewson, "Medical Knowledge and the Patronage System in Eighteenth-Century England," *Sociology* 8 (1974): 369-85; Roy Porter and Dorothy Porter, *In Sickness and in Health, 1650-1850* (New York: B. Blackwell, 1988). Roy Porter, ed. *Patients and Practitioners: Lay Perceptions of Medicine in Pre-Industrial Society* (Cambridge: Cambridge University Press, 1985); Alisha Rankin, "Duchess, Heal Thyself: Elizabeth of Rochlitz and the Patient's Perspective in Early Modern Germany," *Bulletin of the History of Medicine,* 82 (2008): 109-144.

[60] In so doing, I am drawing from a new literature within the history of medicine that investigates how patients' gender, rank, and age influenced the way they narrated illness and its causes and the type of care and attention they received from the healers they consulted. I elaborate on this literature and my contributions to it in the introduction to chapter one.

[61] Thomas Thistlewood, "Thistlewood Family Papers," (Williamsburg: Colonial Williamsburg Library; filmed from the originals in the Lincolnshire County Archives, Lincolnshire, UK), Monson 31/10, November 21, 1759.

[62] Troup Journal, May, 18 1789. See also how a dispute between the enslaved woman Fanny, her daughter Prancer and Dr. Cumming, the plantation surgeon on Golden Spring Estate in St. Andrew's Parish, Jamaica over whether Prancer was sick with a fever, led to Cumming's dismissal a month after their initial conflict in *Daily Advertiser* (Kingston, Jamaica), June 14, June 19, June 21, July 8, and July 15, 1790.

and dietary health regimes that they tried themselves as well as those that healers and practitioners endorsed. One of the types of medical knowledge generated, then, was that which addressed practitioners' varied competencies.

Determinations about the efficacy of different therapeutics and plants or the competencies of a healer were not objective. The consumption of and experimentation with new materia medica occurred alongside enslaved peoples' demands for certain remedies, their descriptions of their sensations and pains, and white managerial staff's assessment of the credibility of their accounts. Conclusions about the efficacy of various therapeutics and healers were based on enslaved and white managerial staff's interactions, which occurred within a coercive labor regime that differentiated between African and creole slaves' credibility. Previous scholarship on medicine in the Atlantic world often attributed actors' motivations to their geographic and political position within the British Empire. This dissertation, however, focuses on the material consequences resulting from variations in the remit of patients of differentiated degrees of sovereignty—enslaved, high-ranking slave, creole, free—and asks how their larger location within a political economy organized around plantation slavery shaped the credibility of the claims they made about the origins of their own illnesses.

Chapter Outlines

"*Experiment and Good Sense Must Direct You"* uses thematic chapters to analyze processes of medical knowledge making taking place on large-scale estates and charts changes over time in the ways in which different groups of laypeople and experts thought about how humans became sick.

Chapter one uses the diary of the Jamaican overseer Thomas Thistlewood to identify the different types healers and their remits on Caribbean plantations at mid-century; to establish the experience of illness for slaves with yaws; and to show how plantation-based record-keeping practices facilitated the development of knowledge about the attributes of venereal disease and its treatment. Chapter two investigates how the concept of what we now refer to as a "population," developed out of exchanges between officers and plantation managerial staff on matters relating to the health of dependents. Chapter three examines the elaboration of research practices associated with the identification and classification of diseases, arguing that this process began after the Seven Years' War and continued after the Haitian Revolution. Debates between the region's practitioners over the identity, origin, and contagiousness of yellow fever did not resolve questions about what yellow fever was, rather they generated the investigatory practices that, during the era of Abolition, practitioners applied to the study of "negro" diseases. Chapter four is organized as a social and cultural biography of dirt-eating. This chapter shows how practitioners who elaborated it as a distinctive disease in printed medical literature assimilated into their explanations managerial etiologies of its origins that developed out of conflicts between African slaves and white managerial staff. Focused on the era of abolition, chapter four also shows how pro and anti-slavery writers manipulated the etiology of dirt-eating to suit their particular political interests. Chapter five uses *The Medical Assistant* (1801), a domestic medical advice text authored by the Jamaican practitioner Thomas Dancer, to explore the ways in which practitioners in the Greater Caribbean gathered local, vernacular information about plantation diseases from managerial staff on large estates in the West Indies, formalized this material through lens

of elite medicine, and then re-vernacularized these ideas for laypeople.. Dancer and medical authors like him throughout the Caribbean created compendiums of useable medical advice that was ready for transport to plantation societies in North America.

Chapter One

Making of Medical Knowledge in the Plantation Enlightenment: *Illness, Recording Technologies, and Social Relations of Healing*

Between 1752 and 1759, Thomas Thistlewood, the overseer of the Egypt sugar plantation in Westmoreland, Jamaica, experimented with two different methods for the cure of crab yaws and recorded the outcome in his agricultural diary. Crab yaws referenced a painful skin condition that afflicted the feet. The sores it produced made it difficult for its victims to walk and stand; to compensate sufferers often distributed their bodyweight on either the inner or outer portion of their feet, resulting in the 'crab-like gait,' for which it is named.[1] In the early nineteenth century, practitioners broke down crab yaws into two distinctive sub-species of a general disease. In their formulations, crab yaws could refer to one of two disorders: either ulcers that spread across the surface of the feet or a painful skin condition in which an indeterminate internal poison became trapped beneath the surface of the skin. In the latter instance, the "yaws are not able to open a passage through the callused soles of a negroe's foot," as one practitioner explained.[2]

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[1] J. Edward Hutson, "crab yaws" in idem, ed. *On the Treatment and Management of the More Common West-India Diseases, 1750-1802,* (Kingston, Jamaica: University of the West Indies Press, 2005), 160.

[2] James Grainger, *An Essay on the More Common West-India Diseases* (London, 1764), 45. In the nineteenth century, physicians bifurcated the two sets of symptoms into distinctive diseases and maintained that the second type was not related to yaws but was nevertheless singular to "negroes," whose preternaturally thickened state of "the epidermis on the sole of the foot and hand," made them more liable to inflammations. Like many nineteenth-century physicians differentiating their expertise on the basis of their ability to identify a disorder's causes, the Jamaican physician James Thomson castigated Africans for their failure to differentiate between the two diseases on the basis of their distinctive origins. "Corns, although confined to Europeans to the toes, attack every part of the foot in the African and they make a general rule of calling every complaint in that part crab yaws, without regarding any idea of infection," James Thomson wrote in *A Treatise on the Diseases of Negroes* (Kingston, Alexander Aikman, 1820), 95-97, quote p. 96. For most of the eighteenth century medical authors and laypeople used the term crab yaws to refer interchangeably to yaws sores trapped beneath the surface of the feet as well as the painful condition associated with the chronic sloughing off of the first layer of skin on the feet and hands. See for example Grainger, 45; Henry Barham, *Hortus Americanus: Containing an Account of the Trees, Shrubs, and other Vegetable Productions of South America and the West-India Islands* (Kingston: Alexander Aikman, 1794), 6. Charles Leslie, *A New and Exact Account of Jamaica* (London, 1739), 329; Thomas Dancer, *The Medical Assistant* (1801), 226; Benjamin Moseley, *Miscellaneous Medical Observations*

Both iterations of the disorder called for immersive treatments—bathing or steaming the feet in decoctions of plants that would either coax the yaws sores to the surface of the skin or eradicate the morbid matter that was behind the constant shedding of the skin. The ailment alarmed onlookers because it signaled an incipient period of yaws. White colonists in the Caribbean believed that if caught early enough, medicines, baths, and topical applications could stop crab yaws from taking root within the patient's humors and becoming a general case of yaws, a disease in which disabling ulcers appeared and spread quite rapidly across the surface of the patient's body. [3]

Crab yaws and yaws more generally were construed by early modern people as a type of venereal disease, an iteration of syphilis that seemed to affect plantation slaves and mariners more often than landbound whites.[4] All three disorders often laid up enslaved laborers for days and sometimes months on end. The capacity of crab yaws to transform into a full-blown case of yaws, a disorder that disabled, disfigured, and impeded enslaved people from working made crab yaws and other forms of venereal disease into culturally dense sites of knowledge-making on plantations in the mid-eighteenth century West Indies. Knowledge-making about crab yaws, like other forms of venereal disease, centered on its transmission, duration, and treatment.

(London, 1789) reprinted in J. Edward Hutson, ed. *On the Treatment and Management of the More Common West-India Diseases*, 103-4.

[3] Yaws is a disorder that contemporary medical science has identified as originating in the bacteria of *Treponema Pertenue*, which infects human bones, cartilage, and skin and is most recognizable in painful swelling among the long bones of human limbs and debilitating concentrations of ulcerous and raised yellow sores that manifest suddenly across the surface of the skin. Both syphilis and yaws share the genus *Treponema:* yaws is thus genetically related to the syphilis bacteria *Treponema Palladium,* subspecies *palladium*. WHO Yaws Fact Sheet, last consulted June 20, 2016.

[4] More specifically, early modern medical thought held that yaws originated in Africa and was an iteration of syphilis. On this conflation see Katherine Paugh, "Yaws, Syphilis, Sexuality, and the Circulation of Medical Knowledge in the British Caribbean and the Atlantic World," *Bulletin for the History of Medicine,* 88 (Summer 2014): 225-252. On syphilis more generally, Claude Quétel, *The History of Syphilis*, trans. Judith Braddock and Brian Pike (Oxford: Basil Blackwell, 1990).

The development of Thistlewood's knowledge of crab yaws and his experiments on its cure coincided with the evolution of professional and social relationships with other white men in his vicinity. In 1752, Colonel James Barclay, a prominent planter in Westmoreland presented Thistlewood with a letter from the Egypt estate's owner, William Dorrill. The following day, the overseer transcribed a recipe for the cure of crab yaws that he received from Barclay. "Barclay says putt hogs-plum tree bark [bark of the *spondias monbin* tree] in a pott to boil with water till strong, then place it over a gentle fire and to keep your feet in it as long as can be bore for nine days and nights, and it will excellently cure crab yaws—that he cure all his negroes so," the overseer wrote.[5] Barclay's recipe contained information about the ingredients, their preparation, mode of administration, and the duration necessary to bring about a cure. Shortly after this encounter, Barclay invited the new overseer to dine with him.[6]

In the months following this exchange, Thistlewood opportunistically experimented with enslaved peoples' ailments. He used the cases of Rose, Quacco, Beniba, Plymouth, Lucy, Lewis, Mary, Betty, Doll, Harry, Lincoln, Lyde, Mazarine, Chrishea, Hector and Toby to draw conclusions about the average length of time— between nine to eleven days— that Barclay's treatment would cure the crab yaws. These cases also generated additional insights that spoke to variations in the disorder's duration. In January of 1754, Thistlewood recorded on Friday the fourth that "Had Beniba's feet put in to sweat."[7] The amount of time that Thistlewood made Beniba sweat her feet

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[5] On Plum-Tree's Linnaean name see Henry Barham, *Hortus Americanus: Containing an Account of the Trees, Shrubs, and other Vegetable Productions of South America and the West-India Islands*, 96.

[6] Thomas Thistlewood, "Thistlewood Family Papers," (Williamsburg: Colonial Williamsburg Library; filmed from the originals in the Lincolnshire County Archives, Lincolnshire, UK), Monson 31/3 Sunday January 5, Monday January 6, Tuesday January 7, 1752, p. 5-6.

[7] Monson 31/5 January 4, January 13, 1754. On January 3 Thistlewood also recorded that "Quaaco came out into the field from sweating his feet," and he might have recorded the date when Quaaco began his

repeated followed what Colonel Barclay had recommended. In his recipe, Barclay also recommended nine days of treatment. In another case, an enslaved woman named Lucy, Thistlewood noted that her crab yaws had taken eleven rather than nine days to heal.[8] By comparing how long Lucy had been absent from work and undergoing treatment against Beniba's and Plymouth's cases, Thistlewood's notations documented examples of the disorder whose duration went beyond the length of time Barclay had stated his cure would require. The creation of knowledge about the disorder entailed the inclusion of cases that did not adhere to Barclay's prescriptive timeframe.

When Thistlewood received additional recipes for crab yaws in succeeding years, he waited to see if they achieved the effects that their authors claimed for them before recording their ingredients and preparation in his diary. In March of 1756, he received a recipe for crab yaws from "Mrs. Wheatley."[9] But he waited at least two months before recording it. In the interim, he tried the cure on new crab yaw victims with seeming success.[10] Mrs. Wheatley's recipe also detailed the state the patient's crab yaws needed to be in order to treat them effectively: "let the crab yaws be ripe."[11] Like Barclay's cure, Wheatley's contained information about the amount of time it would take to achieve its desired effect.[12] Thistlewood used two slaves' cases to verify Mrs. Wheatley's advice.

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treatment, although it is difficult to determine given the torn and illegible condition of the diary for the end of December 1753.

[8] Monson 31/4 June 30, 1753.

[9] The recipe, which he recorded June 1, 1756 read as follows: "Take plum tree root, chop it in pieces, fill a great pot with the chips and water and boil together for a day then put in a piece of allum as big as your fist, give it a boil that the allum may dissolve."

[10] At the start of March he sent an enslaved man named Coffee to search for the "Maiden plum tree root to assist the negroes crab yaw," a principle ingredient in both Barclay's and Wheatley's recipes March 1, 1756, p. 36.

[11] June 1, 1756, p. 95.

[12] "10, 12, or at most 14 days steeping the feet in it as warm as be will affect the cure," Thistlewood recorded, June 1, 1756, p. 95.

He sent first an enslaved woman named Abigail "Into the bath of Mrs. Wheatley's making to cure her crab yaws." [13] Shortly thereafter, the overseer reported that "Abigail went into the field, her feet seem pretty well cured." [14] He then had "Dago's feet put in step for crab yaws," but he did not note when Dago's time with the treatment concluded. [15] Having seen the operations of Wheatley's recipe in two cases of crab yaws, Thistlewood committed Wheatley's recipe for the crab yaws steep into the pages of his diary.

In replicating Barclay's and then Wheatley's cures on the Egypt estate, Thistlewood transformed what had initially been an informal medical practice—the steeping of patient's feet in boiling water with a combination of local plants—into a verifiable medical knowledge. From his perspective, he had obtained trustworthy information about the properties of a disorder, its duration, and an efficacious recipe for its treatment. What was an observation initially in 1752 was tried for a period of four years before it was replaced with another recipe that was used for the ensuing three. Over the course of seven years, the original oral recommendation was observed, disputed, and then transformed into an article of medical knowledge. Recording his observations on different slaves' cases, the overseer weighed the strength of the two different recipes.[16]

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[13] March 16, 1756.
[14] March 27, 1756, p. 54.
[15] May 31, 1756.
[16] My analysis of Thistlewood's medical-knowledge making as the product of experimenting with, recording, and later modifying recipes is informed by a burgeoning literature that uses manuscript recipe books to excavate laypeople's knowledge-making activities in the early modern era. Elaine Forman Crane, ed. *Diary of Elizabeth Drinker,* (Boston: Northeastern University Press, 1991); Sarah Blank Dine, "Diaries and Doctors: Elizabeth Drinker and Philadelphia Medical Practice, 1760-1810," *Pennsylvania History,* 68 (2001): 413-34; Amanda Herbert, *Female Alliances: Gender, Identity and Friendship in Early Modern Britain* (Yale, 2014); Susan Klepp and Karin A. Wulf, eds. *The Diary of Hannah Callender Samson : Sense and Sensibility in the Age of American Revolution* (Ithaca, Cornell University Press, 2010); Elaine Leong, "Collecting for the Family: Recipes, Gender, and Practical Knowledge in the Early Modern Household," *Centaurus*, 55 (2013):81-103; idem and Sarah Pennell, "Recipe Collections and the Currency of Medical Knowledge in the Early Modern 'Medical Marketplace," in Mark Jenner and Pat Wallis, eds. *Rethinking*

By 1759, Thistlewood passed along a recipe for crab yaws to Henry Beech, another overseer who was just starting out.[17] The version of the recipe that Thistlewood gave to Beech were no doubt shaped by the overseer's observations on crab yaws and variations in the recipe's duration and results during the previous seven years. The recipe, as Thistlewood's experiments and recordings proved, was one that other managers could replicate on different estates and find similar results.

As Thistlewood's notations suggest, the repetition of patients with the same disorder enabled the overseer to amass a substantial amount of information about the behavior of the ailment. From his efforts to treat these patients, he also amassed a great deal of know-how relating to the treatment of different disorders: including information on a treatment's principal ingredients; the steps necessary to transform them into a medicine; the way to administer the medicine; the amount of time a treatment typically took to work; and potential complications arising from it.[18] The therapeutic knowledge that Thistlewood generated was indelibly linked to his documentation of the different disorders on the Egypt estate; his knowledge developed from the individual patient histories—however brief—that he set down in his diary.

The episodes of venereal disease that Thistlewood recorded on the Egypt plantation between 1752 and 1759 evidence the ways in which plantations functioned as

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the Medical Marketplace (London: Palgrave-MacMillan, 2007), pp. 133-152; Sarah Pennell "Perfecting Practice? Women, Manuscript Recipes and Know-How in Early Modern England," in Victoria Burke and Jonathan Gibson, eds. *Early Modern Women's Manuscript Writing: Selected Papers from Trinity/trent Colloquim* (Aldershot, England: Ashgate, 2004), pp. 237-258;

[17] Thistlewood received "a note from Mr. Harry Weech," and in return "sent him a recipe to cure the crab yaws. Monson 31/10 Tuesday June 19, 1759, p112.

[18] On the role of paper technologies in guiding how patient's cases were recorded and determining the type of medical knowledge produced as a result see Volker Hess and J. Andrew Mendelsohn, "Case and Series: Medical Knowledge and Paper Technology, 1600-1900," in *History of Science* (2010): 287-314; on seriality more generally in the history of science and medicine Nick Hopwood, Simon Schaffer, and Jim Secord, "Seriality and Scientific Objects in the Nineteenth Century," ibid., 251-285.

a distinctive space of knowledge-making about diseases and their treatment. While other scholarship on Thistlewood and the slaves on the Egypt estate has described in passing the overseer's and his slaves' encounters with venereal disease, this chapter is the first to probe these episodes of venereal disease for analytical purposes: to draw out how differences in enslaved peoples' and middling whites' legal status shaped their experiences with venereal disease and to show how the specific ways in which the record-keeping about slaves' venereal disease influenced the development of medical knowledge about the body, disease, and practitioners in the plantation Caribbean.[19] When white managerial staff observed and grappled with yaws, enslaved peoples' suffering became an object of experiment and observation that informed understanding of venereal disease. Simultaneously, whites' supervision of enslaved yaws patients created consumer intelligence that spoke to the potency of different treatments for venereal disease and the capacities of different healers in the environs of the plantations to wield them. Amassing consumer intelligence while managing slaves' illness, Thistlewood learned to evaluate the competency of various local healers and, later, the practitioners working on or visiting the Egypt estate. Construing yaws as a type of venereal disease that was nearly exclusive to Africans and Afro-Creoles racialized the disorder, but when colonists in Atlantic plantation societies sought practitioners and therapeutics to handle other venereal diseases, including their own, they retried practices prominent in the containment of

[19] Trevor Burnard, *Mastery, Tyranny, and Desire: Thomas Thistlewood and his Slaves in the Anglo-Jamaican World* (Chapel Hill: University of North Carolina Press, 2004), 95, 219-20; Douglas Hall, *In Miserable Slavery: Thomas Thistlewood in Jamaica, 1750-86* (London, 1989); Amanda Thornton, "Coerced Care: Thomas Thistlewood's Account of Medical Practice on Enslaved Populations in Colonial Jamaica, 1751-86," *Slavery and Abolition,* 32 (2011): 535-559.

yaws. Medical practices among blacks and whites in the plantation Caribbean were actually quite porous.[20]

Venereal disease's prominence in Thistlewood's diary and on the Egypt estate makes it an ideal topic for thinking through how illness was experienced and managed in a society sustained by extreme imbalances in sexual and racial power. The cases of venereal disease in Thistlewood's diary reveals the different types of healers called by both enslaved patients and white overseers to treat enslaved people suffering from yaws.[21] Contrary to previous scholarship that has diametrically set the white-created plantation hot-house (hospital) and chemical-based therapeutics against the botanical-based African armamentarium, this chapter shows that overseers shuttled enslaved people suffering from yaws and other types of venereal disease between male African healing adepts, plantation surgeons at the hot-house, and older enslaved females. Enslaved female healers often did not concoct therapeutics but instead were sought out for the different types of bodywork they could provide, which included the dressing of sores and the preparation of decoctions in which slaves afflicted with yaws would bathe. This is not to depict the experience of illness under slavery as anything less than punitive and harsh. My goal is rather to complicate our understanding of enslaved patients' experiences with illness and healing on large plantations. How and where slaves moved between different healing regimes—whether it was haphazard or systematic—depended on the experience

[20] This account contradicts arguments scholars have advanced about the two different worlds of healing pervasive in plantation Jamaica. See for example, Richard Sheridan, *Doctors and Slaves: A Medical and Demographic History of Slavery in the British West Indies, 1680-1834* (Cambridge: Cambridge University Press, 1985) 77-97 as well as what scholars have claimed about the racialization of disease, including Wendy Churchill, "Bodily Differences? Gender, Race, and Class in Hans Sloane's Jamaican Medical Practice, 1687-1688," *Journal of the History of Medicine and Allied Sciences*, 60 (2005): 391-444.

[21] While each ailment was associated with a unique cluster of symptoms whose location, appearance, and painfulness varied, all referenced uncomfortable sensations that manifested primarily in the sex organs, a feature that linked each disorder, etiologically, to venereal disease.

of the overseer in charge of their care, the estate's age and the economic and social connections its owner maintained with other plantations in proximity, and finally, the disorder being treated.

Thistlewood's position as a recently arrived English migrant to Jamaica and a person new to the occupation of overseer makes the period of his life between 1752 and 1759 a rich one for studying the trial and error process through which middling white newcomers from the British Isles—the background of most overseers in the Anglophone Caribbean—assimilated the habits and practices necessary to manage illness on a large sugar estate populated by a predominantly African-born bonded workforce. He arrived on the island in 1750 and after a period of working as the overseer on a livestock pen, he took up the position as the overseer on Egypt in 1752.[22] At mid-century, Jamaica began a long period of sustained economic growth and Westmoreland began to transition from a frontier to a parish organized around sugar plantations and animal pens. Both of these developments coincided with the elaboration of a brutal slave labor regime that depended on coerced African labor and the expansion of a society characterized by extremes in wealth and illness. In 1752, the total population of Jamaica was 120,000 (10,000 whites and 110,000 slaves) but in Westmoreland the proportion of slaves to whites was, one historian estimates, around fifteen to one. Slave deaths far outnumbered births, and the number of slaves in the island between 1750 and 1800 expanded 2.5 times due to white Jamaicans purchases of new Africans from British slavers from west and central Africa. The resulting slave population was between 75 and 80 percent African. Mortality rates among whites were worse than blacks. In the forty-year period between the outbreak of

[22] Philip D. Morgan, "Slaves and Livestock in Eighteenth-Century Jamaica: Vineyard Pen, 1750-51," *William and Mary Quarterly,* 52 (1995):47-76.

the War of Jenkin's Ear and start of the American Revolution, between 1 in 8 and 1 in 12 whites died, and they made up between 6 and 8 percent of the island's population during Thistlewood's residence. [23]

Venereal disease's ubiquity in the plantation Caribbean make the disease an ideal point of entry into the ways in which unequal power relationships mediated the experience and analysis of illness. On the Egypt estate, yaws, clap, and pox incapacitated slaves from working, necessitating assistance from healing adepts and the plantation surgeon. Yaws often resulted in the isolation of its individual victims from the rest of the slave community. Venereal disease also struck down Thistlewood on three separate occasions during the period under study. It infected figures of political and social eminence in the Westmoreland parish and prevailed heavily among the white middling men of similar rank with whom Thistlewood socialized. In Thistlewood's social world white male sexual wantonness and coerced sex with free colored women and slaves formed the pillars of masculine identity. [24] The social stigma that attended sufferers of venereal disease in Britain and North America did seem to have bothered white men in the Caribbean.[25] In such a context, venereal disease was subject of scientific analysis

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[23] The population and mortality statistics in this paragraph are derived from Burnard, *Mastery, Tyranny, and Desire: Thomas Thistlewood and his Slaves in the Anglo-Jamaican World,* 13-17.

[24] On the relationship between male sexual prerogative, rape, and masculine authority in Anglophone slave societies see Kathleen Brown, *Good Wives, Nasty Wenches, and Anxious Patriarchs* (Chapel Hill: University of North Carolina Press, 1996); Trevor Burnard, *Mastery, Tyranny, and Desire: Thomas Thistlewood and His Slaves in the Anglo-Jamaican World*, Kenneth Lockridge *On the Sources of Patriarchical Rage: The Commonplace Books of William Byrd II and Thomas Jefferson and the Gendering of Power in the Eighteenth Century* (New York: New York University Press, 1992); Phillip Morgan, *Slave Counterpoint: Black Culture in the Eighteenth-Century Chesapeake and Lowcountry* (Chapel Hill: University of North Carolina Press, 1998); Jennifer Morgan, *Laboring Women: Reproduction and Gender in New World Slavery* (Philadelphia: University of Pennsylvania Press, 2004); Kathleen Wilson, "The Nation Without: Practices of Sex and State in the Early Modern British Empire," in Catherine Hall and Keith McClelland eds. *Rethinking Nation, Class and Empire* (Manchester: Manchester University Press, 2010): 177-198.

[25] In the British context, histories of venereal disease from the patient's perspective have hitherto relied upon advertisements aimed at literate audiences and the diary of James Boswell, the London literatus. Both

rather than a topic of salacious gossip. Thistlewood was fascinated by venereal disease and he wrote about it, often.

Finding relief from venereal disease in the eighteenth century was often a process of trial and error because of the ways in which it was conceptualized. While early modern people associated white discharge, a burning sensation while urinating and, and painful, involuntary erections with venereal disease, a widely agreed-upon symptomology did not emerge until well into the late eighteenth-century. Unlike our own time, eighteenth-century people maintained a unicist view of VD. Instead of demarcating between gonorrhea (clap) and syphilis (pox), early modern people used these two terms to describe distinctive stages of venereal disease, which began with clap, and if not treated properly, ended with pox.[26] Increases in pain and debility, as well as the arrival of painful sensations in parts of the body far removed from the genitals—such as headaches and arm pain—were sometimes understood to signal a change in the state of the patient's

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Boswell's diary and venereal disease advertisements opened up an important window into the treatment of venereal disease from the perspective of the urban elite and often male patient, revealing the geography of professional healers and quacks that Boswell and his peers navigated in an effort to conceal the nature of their ailment. See Roy Porter, *Health For Sale: Quackery in England 1660-1850* (Manchester: Manchester University Press, 1989); idem, "Spreading Carnal Knowledge or Selling Dirt Cheap? Nicholas Venette's *Tableau de l'Amour Conjugal* in eighteenth-century England," *Journal of European Studies,* 14 (1984): 233-55. An exception to the tendency for scholarship on venereal disease to focus on male patients is Linda E Merians, "The London Lock Hospital and the Lock Asylum for Women," in Merians, ed. *The Secret Malady: Venereal Disease in Eighteenth-Century Britain and France* (Lexington, Kentucky: The University Press of Kentucky, 1996), 128-145.

[26] Physicians believed that venereal disease entered the body through the genitals as a poison, manifesting its symptoms first as a clap. If not treated and eradicated, it proceeded from the site of transmission upwards and inwards, slowly attacking the entire body and transforming into a pox. Care for the clapped aimed to expel the morbid matter at the point of transmission before it contaminated the rest of the body. Both herbal and mercurial concoctions were therefore typically administered to genitals—the point of transmission. In more severe cases, these therapies were supplemented by internal medicines—often in the form of mercury pills—that aimed to expunge the morbid matter from within. The information in this paragraph is summarized from Kevin Siena, *Venereal Disease, Hospitals and the Urban Poor: London's "Foul Wards,"1600-1800*, (Rochester, New York: University of Rochester Press, 2004). See also Philip K. Wilson, "Exposing the Secret Disease: Recognizing and Treating Syphilis in Daniel Turner's London," in Linda Evi Merians, ed. *The Secret Malady: Venereal Disease in Eighteenth-Century Britain and France* (Lexington, KY.: The University Press of Kentucky, 1996), pp. 68-84.

disorder, from clap to pox. But the general ambiguity about when, at what point, and for how long one's status had moved from clap to pox made determinations about the type of practitioner to consult or treatment to pursue at different points in a person's illness highly subjective and contingent on past experiences or information acquired from intimates or perhaps printed materials.[27] The variety of consultants that patients typically sought in pursuing relief from their pain makes VD an ideal disorder to analyze because it provides a unique window into the texture of health and healing in the plantation Caribbean.

Interactions of patients with practitioners have commanded attention from historians of medicine, who highlight the power that patients' narratives held. Patients' narratives and their preferences influenced practitioners' behavior and shaped their ideas about the properties of different disorders and their cure.[28] This chapter is heavily indebted to insights from scholarship that describes the ways in which patients' narratives and decisions generate medical knowledge. It adds to this robust literature, which has primarily centered on patients and practitioners in early modern Europe, by showing how the conventions of agricultural record-keeping and the managerial imperatives that

[27] W.F. Bynum, "Treating the Wages of Sin: Venereal Disease and Specialization in Eighteenth-Century Britain," *Medical Fringe and Medical Orthodoxy, 1750-1850* (London: Wolfeboro, 1987), 5-28. John Marten, *A Treatise of All the Symptoms of the Venereal Disease,* 6th ed. (London, 1708).

[28] On patients' narratives as powerful mediators of practitioners' ideas and behavior see Mary Elizabeth Fissel, *Patients, Power and the Poor in Eighteenth-Century Bristol* (Cambridge: Cambridge University Press, 1991); Michel Foucault, *The Birth of the Clinic; An Archaeology of Medical Perception* (New York: Vintage Books, 1975); N. Jewson, "Medical Knowledge and the Patronage System," *Sociology* 10 (1976): 225-44; Roy Porter, ed. *Patients and Practitioners: Lay Perceptions of Medicine in Pre-Industrial Society* (Cambridge: Cambridge University Press, 1985), idem, "The Patient's View: Doing Medical History from Below," *Theory and Society,* 14 (1985):175-198; Elborg Forster, "From the Patient's Point of View: Illness and Health in the Letters of Liselotte von der Pfalz (1652-1722)," *Bulletin of the History of Medicine,* 60 (1986). For a North American case study stressing patients' narratives as specific type of scientific idiom see Sarah Knott, "The Patient's Case: Sentimental Empiricism and Knowledge in the Early American Republic," *William and Mary Quarterly*, 67 (October 2010): 645-676.

governed Thistlewood's activities shaped which kinds of ailments he investigated and analyzed.

Thistlewood's narration of slaves' ailments as well as his own were structured by writing practices specific to his managerial work as the overseer and record-keeper of the day-to-day operations of the Egypt plantation. I call attention as well to the ways in which the overseer's ambitions to rectify his illnesses and those of his slaves contributed to an evolving knowledge of plantation management. The overseer's quantity of entries is likely idiosyncratic, but the content he recorded is not. His diary's contents manifest his participation in an Enlightenment scientific culture and his internalization of Puritan habits of self-monitoring, both of which required subjects to submit their bodies to daily self-monitoring in order to acknowledge the influence physical sensations associated with illness might have in the workings of their minds and in impeding their capacities for objectivity. When acting in his capacity of overseer of the Egypt plantation, Thistlewood was neither entirely practitioner nor patient. Both navigating plantation Jamaica's medical marketplace on behalf of the slaves under his charge, he simultaneously interpreted their ailments when he made entries on their illnesses and its responses to the treatments he imposed in the pages of his agricultural diary. By positioning Thistlewood as a diarist whose record-keeping sat at the intersection of various forms of scientific, business, and self-writing, I show how his occupation and professional ambitions determined the ways in which Thistlewood constructed and memorialized his and slaves' suffering through different genres.[29] In so doing this chapter builds upon a growing body

[29] For examples of self and occupational writing that mutually influenced one another see Jennifer Desiderio, "The Life Itself: Quaker Women's Diaries and the Secular Impulse," *Early American Literature,* 49 (2014): 185-199; Catherine Field, " 'Many Hands Hands': Writing the Self in Early Modern Women's Recipe Books," in Michelle Dowd and Julie Eckerle, eds. *Genre and Women's Life Writing in Early*

of scholarship that attends to the ways in which patients' gender, legal status, and race mediate the expressions and interpretation of illness and pain. [30]

This chapter begins with the writing practices and conventions that planters and overseers used to organize information they gathered from plantation operations, showing how such conventions were part of a broader project to refine everyday observations into knowledge about the science of plantation management. From there the chapter focuses on three enslaved patients—Hector, Simon, and Abba—whose suffering from yaws and efforts to eradicate it appeared in the pages of Thistlewood's agricultural diary. These three case studies demonstrate how slaves' illnesses informed the overseer's navigation of the plantation medical marketplace. Finally, I turn to Thistlewood's own struggles with venereal disease to show how slaves' ailments informed white medical practices in plantation Jamaica.

I. Towards a History of Agricultural Record-Keeping

"There is no country where dilatoriness and lack of precaution are more fatal," Benjamin Vaughan exclaimed before launching into a lecture on diary keeping on the family's Flamstead estate. From the mid-eighteenth century onwards, the different components of an estate—slaves' work and productivity, weather patterns, and illness—

Modern England (Aldershot: Ashgate, 2007), pp. 49-63; Steven Stowe, "Seeing Themselves at Work: Physicians and the Case Narrative in the Mid-Nineteenth Century American South," *American Historical Review,* 101 (1996): 47-79; Laurel Thatcher Ulrich, *A Midwife's Tale, The Life of Martha Balard, Based on her Diary, 1785-1812* (New York: Knopf, 1990).

[30] On gender as a component of patients' interpretation and narration of their illness see Barbara Duden, *The Woman Beneath the Skin* (Cambridge, Mass.: Harvard University Press, 1991); Lauren Kassell, "How to Read Simon Forman's Case Books: Medicine, Astrology, and Gender in Seventeenth-Century London," *Social History of Medicine,* 12 (1999):3-18;Olivia Weisser, *Ill Composed: Sickness, Gender, and Belief in Early Modern England* (New Haven: Yale University Press, 2015); On status, Catherine Crawford, "Patients' Rights and the Law of Contract in Eighteenth-Century London," *Social History of Medicine,* 13 (2000): 381-410. On gender and race as impingement to veracity in making pain claims Barbara Ehrenreich and Deidre English, *Complaints and Disorders: The Sexual Politics of Sickness* (Old Westbury, N.Y.: Feminist Press, 1973); Sharla Fett, *Working Cures: Healing, Health, and Power on Southern Slave Plantations* (2002).

became analytical points of interest for resident and absentee planters as well as overseers, bookeepers, and attorneys—the free whites occupying the lower tiers of the managerial hierarchy. Planters and overseers orchestrated diverse elements of plantation operations—labor allocation, slaves' and animals' provisioning and health, soil, weather, and the behavior of plants—to bring about a successful harvest. The increasing complexity of sugar estates, however, rendered a miscalculation or failure among even the minutest components of the operation as grit in a machine. "Bad roads, faithless workmen, delay of shipping and the like," could drag operations and profits a standstill. "There is no country that I know of," the absentee planter Benjamin Vaughan proclaimed, "where the great depends so much upon the little as in Jamaica.[31]

The increasing precariousness of profits in Caribbean commodity production at mid-century prompted planters to develop strategies that would transform the management of plantations into a science. They sought especially new quantitative methods to track how trials in the allocation of work assisted or derailed the extraction of slaves' labor and its transformation into profitable commodities.[32] In their efforts to rationalize the management of plantation operations, planters attempted to hone in on the most important elements necessary to run a successful plantation and to transform these into a set of replicable practices that were flexible enough so that individual planters could alter them according to an estate's location, human capital, and the creditworthiness of its owner. Eighteenth-century plantation advice writers and

[31] Benjamin Vaughan, Philadelphia to John Vaughan, Montego Bay, Jamaica, May 15, 1777, in Benjamin Vaughan Papers, Series I, Box 1, American Philosophical Society. Underlining in original.
[32] Justin Roberts, "Uncertain Business: A Case Study of Barbadian Plantation Management, 1770-1793," *Slavery and Abolition,* 32 (2011): 247-268; idem, *Slavery and Enlightenment in the British Atlantic, 1750-1807* (Cambridge: Cambridge University Press, 2013), 57-59

improving planters argued that the interlocking components of plantation-based sugar cultivation operated in a predictable relation to one another. In their printed works and private letters, these groups sought to identify the relationship between the different parts of the plantation management and to distill this information into a replicable set of rules. But the ambition to create a flexible yet broadly applicable rules for administration of a plantation assumed that an estate's overseers and attorneys would track minute changes in different parts of plantation operations and measure the effects of these small changes upon the ensuing crop output.

The paper technologies facilitating this type of measurement included crop accounts, boiling house records, and increase and decrease accounts. They were primarily quantitative and they tracked the allocation of human and animal capital; the arrangement of arable land; and the estate's investments in provisions, housing stock, and agricultural equipment. As summaries of the outcomes of the modifications made within the course of a planting season, these records enabled planters to measure their effects on slave productivity, production yields, and the condition of human capital and livestock. These records formed part of the larger project to rationalize plantation operations. Yet they also emerged in increasing regularity after mid-century as part of an imperial-wide effort to combat mismanagement and abuse of funds. Copies of these accounts were recorded in attorneys' notebooks and sent abroad to absentees. The status of these records as quasi-legal documents that would resolve disputes over an estate's mismanagement facilitated their preservation in greater numbers than the other records, such as personal and agricultural diaries, that did not carry any legal weight.

Scholars writing on the evolution of plantation management do not construe entries prevalent in the Thistlewood diary as part of the habits of record-keeping that contributed to the rationalization of plantation management.[33] This oversight is understandable given that, on first glance, the individual entries in the diary appear to have been entered haphazardly, with no seeming relation to one another apart from having occurred on the same day. Then too, the miscellaneous nature of the entries do not initially appear to support the project of rationalizing management: his diaries included entries that documented which slaves were put to what types of work and when; the type and quantity of birds the overseer shot; the people with whom he slept, ate, and drank; which slaves committed what infractions and how they were punished; where Thistlewood traveled; from whom he received letters; gossip; recipes; and his own bodily sensations. But instead of situating the quantitative forms of record keeping—the boiling house records, mortality accounts, and worklogs—as the basis for the scientific elaboration of plantation management and positioning agricultural diaries as something else—its author's subjective whims—a more useful interpretation places the quantitative paper technologies as interdependent with the lists of activities and observations compiled and stored in agricultural diaries.[34] Both descriptive and quantitative forms of record-keeping facilitated the plantation Enlightenment.

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[33] Scholars of slavery writing about the evolution of a planation management foreground the paper technologies that siphoned descriptive data into quantitative units of analysis, positioning these forms as the preeminent tools of the emerging science of plantation management. Roberts, *Slavery and Enlightenment,* 58-59. But see Burnard on Thistlewood's activities as a naturalist, *Mastery, Tyranny, and Desire,* ch. 3.

[34] On note-taking during the early modern period generally: Ann Blair, "The Rise of Note-Taking in Early Modern Europe," *Intellectual History Review,* 20 (2010): 303-316; idem "Humanist Methods in Natural Philosophy: The Commonplace Book," *Journal of the History of Ideas,* 53 (1992): 541-51. On scientific note-taking Lorraine Daston, "Taking Note(s)," *Isis,* 95 (2004):443-8; On note-taking and the management of medical observations see Michael Bennet, "Note-Taking and Data-Sharing: Edward Jenner and the Global Vaccination Network," *Intellectual History Review,* 20 (2010): 415-32;Volker Hess and J. Andrew Mendelsohn "Sauvages' Paperwork: How Disease Classification Arose from Scholarly Note-Taking,"

The agricultural diary captured and stored quotidian occurrences on an estate of which slaves' illnesses formed a large part. The larger ambition of planters to measure how small changes in operations affected an estate's capital investments, its productivity, and profits determined the writing practices about slaves' illnesses and the types of medical knowledge that resulted. Thistlewood recorded an individual slave's illness as part of keeping track of how he had allocated the estate's human capital for the day. These entries thus contained information on an ailment's duration, severity, and treatment. The lists of slaves who were sick that appear in the Thistlewood diary reminded the overseer why they were absent from work and who attended them.

In the context of a broad effort to make a science out of plantation management, however, the agricultural or plantation diary also functioned as a type of occupational self-writing.[35] It simultaneously encouraged its author to record external events while undertaking the quotidian body-monitoring long held among philosophers a prerequisite in creating a disciplined and objective scientific self.[36] Consulted at different moments of the crop season by various tiers of the managerial hierarchy, the agricultural diary in

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Early Science and Medicine, 19 (2014):471-503; J. Andrew Mendelsohn, "The World on a Page: Making a General Observation in the Eighteenth-Century," in Lorraine Daston and Elizabeth Lunbeck, eds. *Histories of Scientific Observation* (Chicago: University of Chicago Press, 2010); John Stolberg, "John Locke's 'new method of making commonplace books': Tradition, Innovation, and Effects, ibid., 448-470.

[35] On the way that gender and self-hood inform certain types of occupational-identity writing see Toby Ditz, "Shipwrecked; or, Masculinity Imperiled: Mercantile Representations of Failure and the Gendered Self in Eighteenth-Century Philadelphia," *Journal of American History*, 81 (1994): 51-80. On Objectivity as an attribute that is gendered masculine in men's scientific writing see Lorraine Daston and Peter Galison, "The Image of Objectivity," *Representations,* no. 40 (1992): 81-128.

[36] On the importance of body management and regimen in the development of a scientific persona see Mario Biagioli, "Tacit Knowledge, Courtliness, and the Scientist's body," in Susan Leigh Foster, ed., *Choreographing History* (Bloomington, Indiana: University of Indiana Press 1995), 69-91; Jan Golinski, "The Care of the Self and the Masculine Birth of Science," *History of Science,* 30 (2002): 125-145; Lotte Mulligan, "Self-Scrutiny and the Study of Nature: Robert Hooke's Diary as Natural History," *Journal of British Studies,* 35 (1996): 311-42. On Objectivity as an attribute that is gendered masculine in men's scientific writing see Lorraine Daston and Peter Galison, "The Image of Objectivity," *Representations,* no. 40 (1992): 81-128; Rob Iliffe, "The Masculine Birth of Time: Temporal Frameworks of Early Modern Natural Philosophy," *British Journal for the History of Science,* 33 (2000): 427-53.

tandem with the other records where observers summarized outcomes generated the rules necessary for running a profitable sugar estate.

The agricultural/plantation diaries that survive in papers of West Indian estates and North America plantations resemble, in format and ethos, the weather diary. Built up over a period of years, weather diaries provided early modern people, whose lives and subsistence were organized around agricultural cycles, a mechanism for generating estimates: about the length of time (in days) that rains fell and that temperatures would hold. Weather diaries codified how people in the Atlantic world correlated atmospheric phenomenon with the passage of time. [37] Agriculturalists and the scientifically curious amalgamated the data in weather diaries to establish typical amounts and duration of rainfalls, temperatures, and wind patterns within a given period. Excessive drought or rainfalls within a given period gave economists and agriculturalists a method to prognosticate about the possibility of low food supplies and grain riots, and lower than normal crop yields. The predictive capacity of the weather diary—to identify *as a pattern* certain temperature ranges and rainfall amounts occurring in periods of time organized around the civic calendar—made daily weather recording a matter of civic and national significance. The agricultural diary's capacity to illuminate patterns was also what made it the record-keeping tool upon which writers articulating the goals and practices of the agricultural improvement movement would build a *science* of agricultural management.[38]

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[37] Jan Golinski, *British Culture and the Climate of Enlightenment* (Chicago: University of Chicago Press, 2007), 78.

[38] On the agricultural improvement movement in the British Atlantic see Fredrick Albrittion Jonsson, *Enlightenment's Frontier: The Scottish Highlands and the Origins of Environmentalism* (Chicago: University of Chicago Press, 2013); Jay Mokyr, *The Enlightened Economy: An Economic History of Britain, 1700*-1850 (New Haven: Yale University Press, 2009); Sarah Tarlow, *The Archaeology of Improvement in Britain, 1750-1850* (Leiden, Cambridge University Press, 2007); Sarah Wilmot, *The Business of Improvement: Agricultural and Scientific Culture in Britain, c. 1770-1870* (Bristol: Historical Geography Research Group, 1990);

The agricultural diary likewise made similar types of calculation possible: consulted retrospectively, it enabled diarists to measure how the activities and allocation of slaves' labor during one period of agricultural work—say the planting of cane—affected the output during the next phase—say during the harvest (in West Indian parlance, "crop time"). "He that would wish to be a planter," the former Jamaican resident JB Moreton advised, "should attend the field morning until till night, observe the nature of different soils, lime the ground, keep a journal for his own instruction, pay strict attention to cattle and mules, learn to dress them when maimed, to cure them when sick, and to pamper them and keep them in good order." Expertise in planting entailed notes on different slaves personalities and capacities as well. "He should observe the disposition of the slaves, their abilities and strength." The plantation diary could also function as a copy-book for the quantitative information found in boiling house records, worklogs, and increase and decrease accounts. The aspiring planter should "in crop time, stand at the coppers, and pack whole hours daily and nightly, and take his monthly spell in the distill-house," JB Moreton advised.[39] By storing records of these activities, the diary allowed trials with labor and resource allocation to be replicated over time.

The letters of Benjamin and William Vaughan, Jamaican absentees, bring home how important daily record-keeping was in cultivating the practices and identity necessary for a scientific planter. The second-eldest son in his family and a member of the American Philosophical Society, Benjamin Vaughan wanted like so many others to transform plantation management into a system of precepts that could be modified according to an estate's financial position and its geographic location. He directed his

[39] JB Moreton, *West India Customs and Manners* (London, 1793), 49-50.

energy towards three of his younger siblings—Charles, John, and Samuel—who at various times managed the family's Jamaican estate, Flamstead. Sending officious letters to each, Benjamin positioned quotidian diary-keeping as a vital component of agricultural know-how. John, who, in 1777, was "upon the point of embarking to Jamaica," wherein he was to "learn the planting business and become qualified after a time for managing one landed property for his father in that island," became the first recipient of Benjamin's efforts. Writing a ten-page letter of advice to John, Benjamin warned that his instructions on learning to become a "planter" should not function as general counsel because the "letter is founded upon and adapted to a particular character and relates also to a particular country."[40] Generating empirical observations was the first step to forming new managerial insights: "You must make regular experiments…and carefully register those experiments," Benjamin wrote. The diary Benjamin envisioned John keeping would function as a repository of observations that would, if necessary, enable him to challenge timeworn axioms in plantation management.

Diligent note-taking and the careful storage of memorandums were necessary to compare and distill eyewitness events into knowledge about the cultivation of cane and the running of a profitable estate. "Keep a diary; as summary as you please but keep a diary," Benjamin dictated. The paper technology best suited to someone like John, who was still learning the art of planting, was one that packaged loose quires together in one portable medium. "Upon the occasions (and as soon as possible after they occur) take your memorandums down in writing and as papers will be torn or lost, use a little book for the purpose." Daily memorandums would, over time, form new truths out of

[40] Benjamin Vaughan, Philadelphia to John Vaughan, Montego Bay, Jamaica, May 15, 1777, in Benjamin Vaughan Papers, Series I, Box 1, American Philosophical Society. Underlining in original.

observable phenomenon. "Put down minutes of every transaction remarkable in itself or that may be attended with consequences," the older brother specified. A well-composed plantation diary functioned as a journal of record for the daily activities upon the estate. The quantitative data in the boiling and still house accounts would be backed up, as it were, within the pages of the plantation diary. Benjamin instructed John to "take minutes from the estate-books." "Hence only then you can learn planting" the elder sibling proclaimed. In its capacity to preserve observations that could be consulted at a later date and its inculcation of patience, the quotidian diary created an archive of plantation operations.

The agricultural diary held a function beyond storing and preserving observations; like the weather diary and mercantile bookkeeping it inculcated the personal qualities of patience and self-denial necessary to form a competent scientific agriculturalist. "Your diary and your arithmetic will teach you intimate reflection," Benjamin wrote. Absent of sustained analysis, daily note-taking produced mere lists of events. "Review your book morning and evening to see that nothing is undone," the older brother commanded. "You will hear foolish objections to these methods but nevertheless pursue them," he justified the tedious task. Agricultural know-how nevertheless resembled business and philosophical acumen in the slow and cumulative manner by which it was acquired: "things will come upon you by degrees." Self-discipline was essential to agricultural knowledge-making because it enabled the diarist to reveal over long periods the observations related to agricultural practices for drawing general conclusions. [41] "Do not

[41] On the evolution of mercantile writing and recording practices, Donna Merwick, "A Genre of Their Own: Kilaen van Rensselaer as Guide to the Reading and Writing Practices of Early Modern Businessmen," *William and Mary Quarterly,* 65 (2008): 669-712; On the overlap between business and scientific writing, A. te Heesen "Accounting for the Natural World: Double-Entry Bookkeeping in the Field," in Londa

expect to be always right at first," Benjamin warned. If the quantity of the knowledge John extracted from his diary hinged on his self-discipline to keep and review records daily, its quality depended upon the cultivation of patience and reflections on past occurrences.

As a repository of observed phenomenon, the diary was a tool for combatting formal systems of rules that did not allow for modification in the face of new experiences. "All men run into systems first believing without reason and then finding reasons for believing," Benjamin wrote, theorizing about the qualities ruinous to good scientific observation. "Inquire into the explanation of every thing and then silently prove that explanation." In fact elders in the Vaughan family distrusted systems and universal laws as guiding tenets in the principles of the management of the estate. Years later, the eldest brother William attributed the financial disarray that beset Flamstead to the youngest brother Samuel's overreliance on theoretical precepts. Samuel was, "too speculative, too theoretical, and too expensive" William wrote in a private letter to Benjamin.[42] The rigid systems of plantation management promulgated by the proverbial "brilliant flashy talker" of the island were to be mistrusted because they had no basis in precedent.[43] Whilst a newcomer, John should rely on the wisdom of historical practice. "While others therefore are looking forwards, do you be looking backwards, and calculate the fortune from the past," Benjamin counseled. Yet as John gained experience, he could use facts on the ground, stored in his diary, to modify extant wisdom. "Beware

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Schibinger and Clauda Swan, eds. *Colonial Botany* (Philadelphia: University of Pennsylvania Press, 2005), pp. 237-251.

[42] William Vaughan, London to Benjamin Vaughan, Hallowell, ME, August 26, 1800, Benjamin Vaughan correspondence, American Philosophical Society.

[43] Benjamin Vaughan, Philadelphia to John Vaughan, Montego Bay, Jamaica, May 15, 1777, in Benjamin Vaughan Papers, Series I, Box 1, American Philosophical Society. Underlining in original.

of prejudice of thinking that nothing that is old or usually practiced can be changed," he wrote. "Judge, invent, prove," Benjamin closed one of the letter's bullet points. Once John had amassed enough first-hand experience, would he be able to use them to evaluate the wisdom of tradition.

The habits of record-keeping that Thistlewood's occupation as an overseer and his preoccupations as a scientific agriculturalist inculcated shaped the medical knowledge about venereal disease and its treatment he produced. The notations about which slaves were ill and what Thistlewood was doing about them were part of a broader record documenting the allocation of labor and the effects of different crop yields. That Thistlewood stopped recording slaves' quotidian work and their ailments when his position as the Egypt estate's overseer was terminated signals how the occupational imperatives he experienced whilst employed as an overseer determined what events he recorded. When tensions between Thistlewood and William Dorrill came to a head in August of 1752 he was terminated. "He [Mr. Dorrill] ordered Mr. Frook to remark that my wages ceased to day which Frooks very willingly wrote," the overseer noted. [44] Until he was reinstated on January 7, of 1753, the record of slaves' whereabouts and activities in his diary drops off significantly. "Intend to stay at Egypt till I perfectly recover my health," he planned a day later.[45] And indeed, over the next half year, the overseer used his diary to primarily record debts he incurred and payments he made and to record the progress and cure of his own venereal disease.

The practice of tracking slaves' working hours (or their nonproductive time due to illness) accompanied the refinement of medical information (such as the recipes he

[44] Monson, 31/3. August 11, 1752.
[45] Monson, 31/3. August 12, 1752.

received from Barclay and Mrs. Wheatley). Entries, for example, that conveyed the name of the slave being treated for crab yaws were intended to be read alongside additional notes in which the overseer documented the type of work that different members of the plantation's able-bodied workforce had performed that day (weeding, shingling, hoeing, or carting dung etc). For example, between March 14, 1753 and March 16 of the same year, the overseer made daily notations that he had the "crab yaws negroes dressed." On April 16, 1753 Thistlewood noted in his diary that "Mary at home dressing crab yaws." Such entries functioned to keep in the written record of why Mary and the other "lame negroes," listed in earlier entries had been absent from work.[46] That the entries relating to Lucy's ailment documented the time Lucy had been absent from work as well as the duration of her illness highlight the specific ways that illness among workers on the plantations generated medical knowledge. When slaves were too sick to work, their condition created an imperative to record how the estate's hands had spent the day.[47] Thistlewood's notes on slaves' crab yaws and its treatment were part of the larger managerial know-how he was creating through careful record-keeping about slaves' work.

Thistlewood's remarkable self-discipline in record-keeping produced an extensive archive of slaves' illnesses as well as his own. Although the intent to keep one is not unusual among overseers, the scope of Thistlewood's diary is unusual.[48] Between his

[46] Monson 31/4 March 10, 1753; March 14, 1753; March 15, 1753; March 16, 1753; April 16, 1753.
[47] Monson 31/4 June 30, 1753; July 5, 1753. In recording slaves' illnesses (rather than their work routines), Thistlewood could be inconsistent, in all likelihood because he also relied on the estate's hot-house diary, which has not been preserved.
[48] Thistlewood appears to have successfully pressed upon his newphew, John Thistlewood, the importance of daily diary entries. John, who emigrated to Jamaica in 1763, kept a diary and wrote daily entries during his voyage from Britain to Jamaica and thereafter while he resided in the island until his young death in 1765, Diary of John Thistlewood, 1763-65, Box 7, folder 38 in Thomas Thistlewood Papers, OSB MSS 176, Beinecke Rare Book and Manuscript Library, Yale University, New Haven, CT. Other diaries kept by

arrival in the island in 1750 and his death in 1786, he made daily diary entries spanning 1-2 pages, documenting work and sickness on the estate, the books he read, the men he drank with, the slaves from which he purchased or coerced sex, the debts he was owed and he accrued. Thomas Thistlewood's remarkable persistence in the tedium of diary-keeping resulted in a 37 volumes of daily entries, most of which cover an entire year. The entire deposit covers 1748 to 1786. Each journal held between 184 and 354 pages; collectively, his diaries contained over 10,000 pages with individual pages in which the overseer crammed, on average, between 150 and 200 words.[49] The remarkable cache of information he left make him an ideal source for unpacking how illness was experienced, navigated, and interpreted in labor system where whites and slaves were perpetually at war with one another.

II. Observing and Curing Yaws

Just as the generation of knowledge about the cure of crab yaws proceeded alongside the transmission of other forms of strategic instructions and requests related to the day-to-day management of the Egypt estate, the collection of information about the transmission of yaws and venereal disease, its prevention and cure also followed patterns of the estate's communications with other plantations and attendant rhythms of white sociability. As he exchanged provisions, supplies, and specialized slave labor with William Dorrill and John Cope who lived on Egypt's parent estate at Salt River,

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plantation owners or overseers include Journal of a Slave Overseer at Somerset Vale, Jamaica, 1778-9, Codex Eng 180, The John Carter Brown Library, Providence, RI; Diary of Robert Wellford of Virginia, Mss1W4599a5, Virginia Historical Society, Richmond, VA; Landon Carter Diaries, 1752-1778, M-10099.1-2, Alderman Library, University of Virginia, Charlottesville, VA; William Dry's Journal of Ludlam Estate (South Carolina) in Society for the Propagation of the Gospel, Fulham Palace Papers MS, transcript, Library of Congress, Washington, D.C.; Journal of Rene Ravenel, 1780-1853, in Henry Ravenel Family Papers, MS. 1171.02.01, South Carolina Historical Society, Charleston, SC; Samuel Mathias Journal, 1781, South Caroliniana Library, Columbia, SC.

[49] Burnard, *Mastery, Tyranny, and Desire,* 24-25.

Thistlewood also encountered other white males who conveyed medical recipes and advice alongside the owner's replies to Thistlewood's letters. Therapeutic know-how moved between large estates as part of white sociability and day-to-day managerial operations, as overseers communicated with enslaved adepts and white managerial staff on adjacent estates about matters as prosaic as food supplies and hogsheads.[50]

Thistlewood and white middling men with whom he socialized continually circulated information about the transmission of "clap," and "pox" as well as cases of men infected with yaws, signaling their relative lack of shame about venereal disease compared with their counterparts in Britain. The predominant view among white residents in the Caribbean was that African and Afro-Creoles and perhaps European sailors were the groups most susceptible to yaws. Still the queries and anecdotes Thistlewood and his social circle of men told about one another signal an ongoing desire to probe the racial and occupational categories dictating who was vulnerable to the ailment. Many of the anecdotes they circulated forged a relationship between a yaws infection and white male sexual licentiousness. Before he had ever encountered a case of yaws on the Egypt estate, Thistlewood recorded a story linking yaws to other forms of venereal disease. "Mr. Williams says he has not known above a dozen different women and has been clapp'd 3 times and pox'd once beside getting the yaws, which he is afraid is not presently cured of etc," the overseer noted after working and dining with Williams in June of 1752. [51]

[50] On Monday January 6, 1752 Colonel Barclay gave Thistlewood a letter from Dorrill. On Tuesday January 7, 1752 (p. 6) Barclay invited Thistlewood to dine with him during which he gave him his recipe for the cure of crab yaws.
[51] June 10, 1752, p. 149.

Thistlewood's enslaved mistress Phibbah relayed examples of whites in Thistlewood's social circle who had, at one point, battled the disorder. Phibbah's longstanding residence in the island and the plantation provided her with information about whites' past illness episodes that they did not openly share with the other whites in their social circle. The context in which Thistlewood received this information overlapped with his concerns that he had become infected with yaws in 1754. "Note: Between the thumb and the forefinger of my right hand and on the forefinger of ditto, on the inside by the first joint is (and has been, for near these twelve months past) something very much resembling the dry crab yaws, which by time cracks and is very sore. I can't get it well," he wrote one evening in 1754. Phibbah informed the overseer that William Dorril, the estate's owner, had suffered from yaws as a child. "Mr. Dorrill had yaws when a boy. (Phibba)," Thistlewood wrote in 1754, noting the provenance of this piece of information about his employer. [52] Phibbah's information probably augmented his suspicion about having contracted yaws—she gave him an example of another white person who had sickened with yaws—even as she may have attempted to differentiate the sores on his hand as yaws from a different type of skin ulcer. That he learned of Dorrill's case of yaws in the same evening that he had a sexual encounter with Phibba is suggestive of the overlap between sex, caregiving, and intimate knowledge of venereal disease on West Indian estates.

Amassing information on the transmission of yaws and different racial categories of people susceptible to its infection through intimate and male sociability represented two ways of learning about it, but close scrutiny of enslaved peoples' responses to

[52] February 27, 1755, p. 49.

different therapeutic applications also had a place in Thistlewood's project to standardize practices for curing enslaved sufferers. As he implemented different types of regimens for yaws his medical practices became more fixed as a result of his long-term observations. The question of how to treat yaws arose repeatedly in the Thistlewood diary between 1752 and 1759, during which the overseer documented approximately thirty cases. Thistlewood's uncertainty about how to best treat yaws are best illustrated by examining how his methods evolved over the seven-year period. Between 1752 and 1757, eighteen cases of yaws presented among the slaves on the Egypt estate and Thistlewood sent all of these patients to be cured at "Hill," where they remained for varied periods of time. Hill referred to an estate where the enslaved healer Old Sharper lived, and it was probably located near the seashore. Slaves suffering from yaws who were sent to Hill were likely forced to bathe in the sea, as saltwater was understood to assist in curing yaws ulcers.

Setting Hector's case of yaws, which Thistlewood oversaw from 1755-56, against Simon's and Abba's, which occurred from 1758-59, illustrates how malleable Thistlewood's ideas were as he encountered new cases and information. In January of 1755 Thistlewood identified Hector, an enslaved man on the Egypt plantation, as having yaws.[53] A full five months passed before any mention of Hector appeared again in the diary, until in June of that year when Thistlewood sent him to Hill for his yaws along with Cloe and Prince. [54] In the fall, "Old Sharper brought home Hector, Prince, and Cloe, but as none of them are well yet, made him take them back, and Morris with them." [55] It

[53] January 22, 1755.
[54] June 24, 1755.
[55] October 19, 1755.

is unclear why Old Sharper, the watchman and enslaved healer at Hill, brought the slaves with yaws back to Egypt prior to their full recovery. Perhaps the number of patients for which Old Sharper was responsible—it is possible that nearby estates also sent their slaves with yaws to Hill—placed too much of a burden upon him along with his obligations as a watchman and barber. In that scenario, Old Sharper may have returned slaves with yaws who were on their way to a recovery home sooner than expected to place upon their families the burden of caregiving, dressing their sores, and preparing their meals.[56] After Thistlewood sent them back to Hill, Hector along with Cloe, Morris, and Clara remained there from October of 1755 until March of 1756.[57] In early April of 1756, Thistlewood reported that "Hector, come home to work from Hill recovered of the yaws."[58] Sending slaves away for isolation, bathing, and perhaps a specific diet under the watch of Old Sharper operated as an important tool in the overseer's arsenal of yaws management.

The turning point came in 1758, a period of information gathering when the overseer collected three different recipes for the cure of yaws and topical applications intended to dry up yaws ulcers. Over the course of the year he implemented these methods on eleven different yaws patients. Thistlewood acquired his first recipe for yaws in the spring of 1758, when he recorded in his diary "an approved cure for the yaws from Mr. Cope." Mr. John Cope was William Dorrill's son-in-law and the successor of the

[56] On Old Sharper's position as a watchman see March 10, 1752; May 18, 1753. On his work as a barber see Thistlewood's payments to him for shaving his face on March 28, 1752; August 7, 1752. Old Sharper also prepared and administered a diet drink associated with the treatment of clap and pox, his work as a healer will be discussed in section three of this chapter.
[57] See Thistlewood's note on Hector, Morris, Clara, and Cloe at Hill for yaws March 31, 1756.
[58] Thistlewood diary, April 21, 1756. Because the overseer inconsistently recorded the return of slaves from Hill, it is difficult to measure the average amount of time spent away from the estate. Three slaves—Hector, Cloe, and Prince—remained at Hill for four months, returned to the Egypt estate, and were then sent back because they when he determined them unfit for work on the plantation.

Egypt plantation.[59] In qualifying the cure as "approved" from Mr. Cope Thistlewood was signaling its provenance and perhaps indicating that Cope wanted Thistlewood to employ this remedy and this remedy alone on the estate.[60] Guaiacum wood and sarsaparilla leaves were one of two treatments used most commonly for venereal disease in early modern Europe. Sure enough, Cope's cure consisted of a compound drink that combined Lignum Vitae [Guaiacum] wood chips and Sarsaparilla leaves bruised into a powder, mixed with Senna, a tropical plant that works as a laxative. The recipe instructed its user to boil these ingredients in an iron pot with three pints of water, evaporating this mixture down to one quart. Cope instructed Thistlewood that the drink should "be drunk every day 4 different times." The "rest to be repeated three times in 42 days."[61] The way Thistlewood transcribed Cope's recipe is confusing, but it appears that Cope intended yaws patients to consume pills comprised of sublimated sulphur "flower brimstone" in order to "drive the yaws out well," before beginning the diet drink. Cope's instructions detailed the body temperatures necessary to ensure that the poisonous yaws humors reached the surface of the skin while the patients were taking the sulphur pills, but he did not specify the length of time regimen should last prior to beginning the senna and lignum vitae drink. "The patient must be kept warm by night and worked by day," read a line at the end of the recipe.

The enslaved man Simon and the enslaved woman Abba stand out in Thistlewood's record-keeping because he put them through multiple iterations of yaws cures as he gathered and tried different recipes between 1758 and 1759. That both Simon

[59] Burnard, *Mastery, Tyranny and Desire,* 50.
[60] Thistlewood diary, March 27, 1758, p. 26.
[61] March 27, 1758.

and Abba belonged to Thistlewood rather than Cope may have encouraged Thistlewood to go beyond Cope's methods and invest more heavily in different cures for Simon and Abba, despite the pain that might endure as a result from the new ingredients.[62] The same day that Thistlewood received Cope's recipe, he noted that "Simon so bad with the yaws have put him to work in Phibba's ground," an entry indicating that Simon was too infirm to perform tasks associated with sugar cultivation. [63] A week after receiving Cope's recipe, Thistlewood sent Simon to live at Egypt with "old Bella, who will make him stir about," during the day.[64] His entry suggests that Thistlewood was putting Simon through the first stage of bodily preparation detailed in Cope's recipe: the sulphur pills, daily exercise, and warm temperatures at night that would draw the yaws humors into the ulcers on the surface of the skin. In August, four months after Simon was sent to live with Old Bella, Thistlewood received from the estate's surgeon, John Gorse, 4 ½ ounces of senna "for Simon," and another slave named Hope.[65] He presumably started Simon and Hope on the compound drink composed of lignum vitae, sarsaparilla, and senna that Cope had endorsed. At the start of October, Thistlewood reported that Hope was cured: "made Hope go out to work: being well of yaws."[66] These entries indicate that Thistlewood used Cope's recipe, which met with moderate success.

Yet in the early fall of 1758, Thistlewood began to search around for alternative cures. Simon was not yet well (he would suffer with yaws until November of 1759), and he learned that his other slave Abba, was also full of yaws. [67] Abba was a slave that

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[62] Thistlewood purchased Simon for £51 in 1758 and sold him for £31 1761. Burnard, *Mastery, Tyranny, and Desire,* 56-57.
[63] March 27, 1758.
[64] Tuesday April 4, 1758.
[65] Monday August 21, 1758, p. 92.
[66] Monday October 9, 1758, p. 116.
[67] On Abba's purchase and apprenticeship see Burnard, *Mastery, Tyranny, and Desire,* 221.

Thistlewood had purchased in February of 1758 and whom he had apprenticed in July to the tavern-keeper Thomas Emotson and his wife in order to learn to be a seamstress. [68] "Abba comes home from Mrs. Emotson's, having several bone-ache sores on her leg, that we may try to cure her," Thistlewood wrote October 15, 1758. When Thistlewood learned of Abba's yaws, he began to gather advice from the multiple white practitioners who visited the estate. Within a week of Abba's return, Thistlewood received information that amended Cope's yaw's cure: "Dr. Roberts says give a negro a spoonful of brimstone [sulphur powder] and lignum vitae and molasses , for six weeks before he takes the diet drink. And now and then the mercury pill."[69] Whereas Cope had prescribed flower brimstone [sublimated sulphur] as a preparatory regimen for the diet drink, Roberts suggested patients consume a key ingredient in Cope's concoction—lignum vitae—prior to beginning the diet drink regimen.

Perhaps Thistlewood was skeptical of Cope's and Robert's reliance on brimstone and concerned that their recommendations contradicted one another. Whatever the reason, Thistlewood continued to collect recipes that he believed would achieve the same effects—of coaxing the yaws poison that had infected Abba's body to the surface of her skin—without the pain, suffering, and expense associated with mercurial medicines. A week after Thistlewood recorded Dr. Robert's cure, Dr. Wedderburn visited the estate on behalf of Jenny, an enslaved woman on the brink of giving birth. Thistlewood consulted with Wedderburn on Abba's illness and he "advised me to soak Abba's sores in a warm bath of Bulla tree or Mangrove bark, for ½ hour, every morning, to draw out the humor,

[68] Sunday October 15, 1758, p. 120.
[69] Friday October 20, 1758,p. 123.

then to dress them with yellow basilcon, etc."[70] It is not clear whether Thistlewood used Cope's, Robert's or Wedderburn's advice in the treatment of Abba's case. He possibly employed Robert's amended drink and Wedderburn's topical applications in preparation of the regimen that Cope advised.

Thistlewood continued to use Cope's diet drink, comprised of sarsaparilla, lignum vitae, and senna for his own slaves afflicted with yaws. In early November Dr. Gorse sent "9 ounces senna for the yaws negroes," a group that presumably included Abba and Simon.[71] If he did submit Abba to a regime of preparation for the diet drink, he did not wait the six weeks recommended by Roberts but experimented with its immediate effects. "Abba and Toby began course of diet drink" Thistlewood wrote at the four days after receiving senna from Gorse.[72] Was it a success? The diary is unclear. If one measures success by the ability to work again then the experiments were successful. By August of 1759, Abba was well enough to have her sores dressed by Eve, for which Thistlewood paid Eve six bits.[73] The following November, Thistlewood "Made my Simon go in the field again to try him once more."[74] The same year, in October of 1759, Thistlewood sent only one yaws patient (Little Mimber) to Hill for her cure, the others he kept on the Egypt estate in the plantation's hospital or in separate huts, administering medicines he ordered from one of four plantation surgeons who contracted with the estate or sold medicines.[75]

[70] Saturday October 28, 1758, p. 126.
[71] November 2, 1758, p. 128.
[72] November 6, 1758, p. 129.
[73] August 31, 1759.
[74] Monday November 5, 1759.
[75] Little Mimber sent to Live at Hill October 29, 1759. Hope confined to a separate hut February 11, 1759.

Thistlewood's experiments avoiding and administering harsh chemical medicines containing sulphur in the management of yaws reinforced for him the importance of choice in practitioners and medicines. As was the case with his management of slaves' yaws as he sought to interpret and heal his own venereal disease, experiment called for the application of different medicines and topical formulas, significant dietary modifications at various stages of the disorder, and a careful scrutiny of the outcome of these interventions. It could also take the form of trying the advice of different healers with varying backgrounds whose ideas about venereal disease informed its cure.

III. "A confounded Clap": Confronting and Managing Venereal Disease on the Egypt Plantation

The records Thistlewood made documenting the onset, duration, transmission of yaws and its treatment informed his later personal experiences and struggles to cure his own venereal disease. During the same period that Thistlewood recorded observations on slaves' yaws, he employed his diary to document, often in stupefying detail, the various aches, pains, and unusual emissions and sensations characteristic of his own condition; to chart and evaluate the efficacy of the various treatments he undertook; and to record the varied sources of medicaments, healing, and caregiving that he obtained in pursuit of a cure. In the process Thistlewood logged not only the performance of the different remedies he ingested and applied and his body's response to them, but also the social and monetary debts he racked up among the various enslaved and free healers he consulted along the way. Over the course of twenty-six months, Thistlewood consulted five healers, three provided him with external remedies and two of them cared for his body and prepared his meals, and he also employed twelve different medicaments. In all, an

impressive array of resources for an individual living in one of British Jamaica's recently incorporated parishes and the periphery of the British Empire.

Thistlewood's interpretive work transformed his diary from an account of the debts he had incurred in the course of his illness into a technology that assisted his understanding of the therapeutics with which he had experimented. Thistlewood meticulously recorded the immediate results of the various medicines he consumed. "This morning took a dose off jalap & gumbage mixed, vomitted me violently and purged somewhat harshly," he recorded on September 22, 1756. In addition to noting the immediate consequences of his treatments, Thistlewood also worked to understand their cumulative effects. Notations such as "I find myself somewhat better," which he recorded on September 24, 1756 when he had run out of medicine, were relational. These entries generated personal meaning for Thistlewood only in so far as they could be placed in dialogue with previous entries documenting the specific symptoms and combinations of medicines he had consumed in order to alleviate them. Entries of the varied medicaments he utilized, his body's immediate responses to them, and his long-term progress not only produced a chronicle of illness, they generated individualized yet written knowledge of venereal disease, its properties, progression, and remedies. The making of this knowledge depended as much on Thistlewood's writing practices—the litany of aches, pains, sensations, and emissions as well as the medicaments and devices he utilized to alleviate them that Thistlewood inscribed into the pages of his diary—as on the experiments with different therapeutics that Thistlewood and the healers he consulted undertook.[76]

[76] Thistlewood's first biographer investigated the overseer's painful episodes of venereal disease and the frustrations he endured as he sought to alleviate the pains associated with them. See Douglass Hall, *In Miserable Slavery: Thomas Thistlewood in Jamaica, 1750-1786* (Mona, Jamaica: University of the West Indies Press, 1998). More recently Katherine Paugh used Thistlewood's treatment of his venereal disease to

Thistlewood's reliance upon Old Sharper reveals that whites placed enslaved healing adepts like Old Sharper on equal footing with white practitioners.[77] Thistlewood called upon Old Sharper to assist him with his own case of venereal disease in early March of 1755 when he recorded that he had "pain in my groin and feel oddly, also perceive a small glict [Gleet—thin, fluid issuing from ulcers, generally associated with gonorrhea]."[78] Uncomfortable and involuntary discharges of semen, burning sensations when urinating, and the appearance of sores on the genitals were the common symptoms of patients suffering from the early stages of both gonorrhea and syphilis.[79] Two days after his initial discomfort Thistlewood "went to Hill and bespoke some off Old Sharper's diet drink."[80] On the following day Thistlewood recorded that " the running increases, and rather begins to burn & the colour off the running turn yellow, with a prodigious

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show the overlap between the etiologies of yaws and venereal disease in the thinking of eighteenth-century Caribbean colonists in "Yaws, Syphilis, Sexuality, and the Circulation of Medical Knowledge in the British Caribbean and the Atlantic World," *Bulletin for the History of Medicine,* 88 (Summer 2014): 225-252. Philip Morgan has noted that Thistlewood acquire tidbids of sexual information related to venereal disease from his slaves, including that "women with sores ought not to have sex," Philip Morgan, "Slaves and Livestock in Eighteenth-Century Jamaica: Vineyard Pen, 1750-1751," *William and Mary Quarterly,* 52 (1995): 47-76, quote p. 71. Insufficiently appreciated by Hall and Paugh, however, is the way the overseer's record-keeping functioned as a means to generate both formal and haptic medical knowledge about venereal disease. Thistelwood's entries provided important insights into the properties of the venereal disease and the severity of his own case, the types of medicines and applications that worked on his body and encouraged it to heal, and the relationship between the intensity of the care/bodywork he commissioned or undertook himself and his recovery.

[77] There is a rich scholarship on the medical authority and botanical know-how wielded by enslaved adepts in the eighteenth-century Atlantic world. See for example, Juanita Barros, "Dispensers, Obeah, and Quackery: Medical Rivalries in Post-Slavery British Guiana," *Social History of Medicine,* 20 (2007): 243-61; Herbert C. Covey, *African-American Slave Medicine: Herbal and Non-Herbal Treatments* (Lanham, KT: Lexington Books, 2007); Jean Claude Eymeri, *Histoire de la Médecin aux Antilles et en Guyane* (Paris: L'Harmatton, 1992); Bernard Moitt, *Women and Slavery in the French Antilles, 1635-1848* (Bloomington, IA: Indiana University Press, 2001); Philip Morgan, *Slave Counterpoint,* 624-29; Julien Touchet, *Botanique and Colonization en Guyane français, 1720-1848* (Cayenne: Ibis Rouge Editions, 2004), 72; Karol K. Weaver, "The Enslaved Healers of Eighteenth-Century St. Domingue," *Bulletin of the History of Medicine,* 76 (2002): 29-60;

[78] March 8, 1755.

[79] As was consistent with contemporary thought, Thistlewood did not diagnose his condition as either "gonorrhea," or "syphilis."

[80] March 10, 1755.

soreness at the end of the penis."[81] Enslaved healers like Sharper likely employed similar plants used to cure yaws, such as lignum vitae and sarsaparilla in the cure of venereal disease.

Recourse to healers like Sharper offered the possibility that he could avoid the use of harsh mercurial medicines, which were painful and had visible side effects. Mercurial salivation, was also used to treat other diseases that manifested upon the skin, such as leprosy. In addition to gum guaiacum, mercurial salivation, which mostly took the form of ointments infused with mercury, was the standard recommendation of many European-oriented healers for the cure of venereal disease. The primary goal of mercurial salivations was to evacuate the morbid matter causing venereal disease through salivary excretion. Mercury-based ointments and rubs were prescribed to patients, who applied them to their genitals and elsewhere on their body. Regimes of salivation typically lasted from four to six weeks.[82] Mercurial treatments could be excruciating. Patients salivated copiously, often spitting between three to four pints per day.[83] Then too, extended exposure to mercury produced a metallic odor emanating from the breath. Excessive mercury often caused internal poisoning, nausea, swollen gums, and loose teeth.[84] These visible side effects signaled out mercury's consumers as undergoing treatment for an ailment that was in Europe stigmatizing but seems to have been less shameful in the unbuttoned Caribbean.[85]

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[81] March 11, 1755.
[82] Siena, *Venereal Disease, Hospitals, and the Urban Poor,* 23.
[83] B.F. Bynum, "Treating the Wages of Sin: Venereal Disease and Specialization in Eighteenth-Century Britain," *Medical Fringe and Medical Orthodoxy, 1750-1850* (London: Wolfeboro, 1987), p. 16.
[84] Bynum, "Treating the Wages of Sin," 16; Porter, *Health for Sale,* 153; Sienna, *Venereal Disease, Hospitals and the Urban Poor* 23.
[85] Porter, *Health For Sale,* 146-186.

When indexing resources available for the cure of venereal disease, it seems likely that Thistlewood juxtaposed Sharper's healing routine against the one of European-medical orthodoxy that Gorse and Cope embodied, which held that mercury was the only means to cure venereal disease. At Hill, Sharper supervised enslaved yaws' patients bathing. Dr. Gorse and Mr. Cope, in contrast, had offered up drinks that sought to expel the yaws humors using sublimated sulphur powders. In his mental map of plantation Jamaica's medical marketplace, Thistlewood associated Old Sharper with less dramatically invasive treatments for yaws.

Analysis of Thistlewood's consumption of Old Sharper's diet drink, particularly the various exchanges it entailed, illustrates healing and caregiving organized around slaves' interpretive and manual labor. Old Sharper acted as Thistlewood's primary source of medicine for three weeks. During this period, Old Shaper concocted the diet drink on demand, manufacturing enough to last Thistlewood between five and six days. Thistlewood usually consumed the diet drink by the quarter of a bottle, but when he perceived that his condition had worsened, he increased his dosage. Over the course of three weeks, Thistlewood refilled his supply four times. Old Sharper received three bottles of dram (an alcoholic fruit-drink or cordial) total as payment. The exchange of goods for payment occurred primarily in face-to-face exchanges between Thistlewood and Old Sharper, (it was not set down in Thistlewood's record-book as a debt that would be paid at a later date). When ordering and paying for his medicine, Thistlewood went directly to Old Sharper and brought with him the drams to compensate Sharper for his interpretive and manual labor .

Thistlewood's involved the labor of female slaves who were his sexual intimates in his personal care. One woman, Egypt Susanah transported the overseer's urine to Old Sharper for him to interpret. On March 17, for example, Thistlewood "sent Egypt Susanah with some water & recd: back by her some diet drink in a gourd," from Old Sharper.[86] Egypt Susanah functioned as a courier of medicine and urine: she carried Thistlewood's urine to Old Sharper and returned to Thistlewood with the diet drink that Old Sharper had made on three separate occasions while Thistlewood was under Sharper's care. That Thistlewood employed Egypt Susanah to convey urine and medicine suggests that Thistlewood could not or did not bother to hide his condition from the bondspeople he lived with.

Old Sharper's methods mirrored ideas about the care of specific disorders and body management with which Thistlewood would have been familiar as a British colonist. Thistlewood's description of Old Sharper's treatment as a *diet* drink suggests that Thistlewood understood he was consuming a venereal disease treatment that was not mercurial-based. The term diet drink also referenced a therapeutic culture that centered upon dietetics. In this arena of early modern medicine, healers claimed that their authority to treat derived from their ability to generate dietetic concoctions that would restore balance to the particular constitution of the individual patient.[87] Thistlewood's description of how he first obtained the diet drink suggests that he recognized Old

[86] March 17, 1755. Egypt Susanah was a fairly high-ranking slave with whom Thistlewood maintained an ongoing sexual relationship, sometimes in exchange for goods. On uroscopy as mode of internal analysis in eighteenth-century medical interpretation see Michael Stolberg, *Uroscopy in Early Modern Britain* (Ashgate: Farnham and Burlington, 2015).

[87] On physicians' authority within dietetic culture see Steven Shapin, "Trusting George Cheyne: Scientific Expertise, Common Sense, and Moral Authority in Early Eighteenth-Century Dietetic Medicine," *Bulletin of the History of Medicine,* 77 (2003): 263-297.

Sharper's practices as analogous to that of dietetic physicians. Thistlewood wrote that he "… *bespoke* some off Old Sharper's diet drink."[88] Thistlewood's use of the word "bespoke" as opposed to "ordered," "acquired," "received" or simply "got," to describe the process of purchasing Old Sharper's cure suggests that Old Sharper manufactured the cure to suit the condition of Thistlewood's particular body.[89] That Thistlewood initially visited Old Sharper in person at Hill, rather than dispatching Egypt Susanah or Dover (another male slave who would later convey the diet drink to Thistlewood when he ordered more) suggests that assessment of the individual patient's body or the state of his venereal disease was part of Old Sharper's method.

Elements of Old Sharper's practice reminded Thistlewood of the non-European elements of Sharper's craft. Old Sharper continually sent his "diet drink in a gourd" and Thistlewood noted this repeatedly in his diary.[90] More than a mere curiosity, however, the gourd's unknown capacity potentially hindered Thistlewood's efforts to standardize his own dosage and, perhaps, the exchange value of the drams in which he paid Old Sharper.[91] When Thistlewood recorded, repeatedly, that he consumed "a bottle off old Sharper's diet drink" or "drank a quart bottle of old Sharper's diet drink," he was translating the contents of Sharper's ambiguously-sized gourd into familiar units of

[88] March 10, 1755. My italics.
[89] The fact that Old Sharper received Thistlewood's urine is one piece of evidence that Sharper was assessing Thistlewood's fluids—both before and after the diet drink. It is not clear whether Sharper conceptualized his patients as having distinct constitutions. Nevertheless the term "bespoke" indicates that the diet drink was personalized or custom made according to the needs of the individual patient, or in this case, what Sharper could perceive about the overseer's condition and his disorder from urinalysis.
[90] March 17, 27, 31, 1755. On the use of gourds in other African-American healing cultures in the Atlantic see Pablo F. Gómez, "Transatlantic Meanings: African Rituals and Material Culture from the Early Modern Spanish Caribbean," in Akinwumi Ogundiran and Paula Sanders, eds. *Materialities of Ritual in the Black Atlantic* (Indiana University Press, 2014), 125-142.
[91] It is unclear whether Thistlewood paid Old Sharper for a "cure" or for a specific quantity of diet drink.

consumption, the same ones that Cope had employed in describing the quantity of his senna drink.[92]

Thistlewood employed his diary to track the changes that Sharper's diet drink wrought on his condition. The manner in which he took notes on the effects of Sharper's medicines mirrored the ways in which he assessed recipes from whites that he had used on slaves. In documenting his own body's response, however, Thistlewood was much more diligent in his observing and note-keeping. On March 13, 1755, two days into his treatment, Thistlewood recorded that he "continue much the same."[93] After three days of the diet drink, Thistlewood appeared frustrated with the lack of progress, "drank a quart bottle of old Sharper's diet drink nevertheless am not better, a prodigious burning when I made water and painful involuntary erection at night."[94] Yet he pressed on. "Can't perceive I am any thing the better yet, run very much a yellowish matter, and hurt very much when I make waters, also when warm in bed at night, a pain in the right groin &c," he recorded on March 15, day four of his treatment.[95] Day five brought even less startling results: "drank a bottle off Old Sharper's diet drink, much as yesterday only head ach more & dimness off my eyes," he submitted.[96] "Drank a bottle off Old Sharper's diet drink, worse if any thing!" he despaired on day six.

Thistlewood used his ailment to resolve his questions about the safety of lime water as a cure for venereal disease. In July of 1753, for example, Thistlewood received from Dr. Gorse a cure for venereal disease whose principle ingredient was lime water [a

[92] March 13, 1755, March 14, 1755.
[93] March 13, 1755.
[94] March 14, 1755.
[95] March 15, 1755.
[96] March 16, 1755.

combination of water and limestone]. "Lime water made with lignum vitae instead of cassava water," he wrote down. "Drink pint per day 4X for a fortnight or for three weeks and cold bath."[97] A week later, in early August, Thistlewood abandoned this treatment and he returned to Sharper. He used Sharper's drink for around two weeks, but in mid-August decided to intersperse Gorse's lignum vitae and lime water cure with Sharper's "preparation."

Confronting, in 1755, a stubborn case of venereal disease that Old Sharper's cure was not resolving as fast as it had in 1753, Thistlewood used the opportunity to observe how small modifications in his diet affected the potency of Sharper's medicine. About a week into his cure, Thistlewood looked at lime juice as a chief impediment to his repair. "Suppose the lime juice, or spirits hinder my mending," he noted. He had reason to connect lime juice with impediments to a man's sexual organs. Two years prior he recorded an entry stating that "the negro girls there say lime juice renders a man impotent," he wrote, horrified.[98] In 1755, Thistlewood abstained from acidic drinks in order to speed up his recovery. He wrote that he "avoided punch and every thing that had spirit or lime juice in it."[99] His condition got only worse however; by day nine he reported that he "have 2 caruncle which give me a good deal of pain."[100] Their appearance signaled to Thistlewood not that it was time to forgo the diet drink, but rather that he needed to supplement it with harsher and perhaps more powerful remedies.

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[97] July 26, 1753.
[98] September 7, 1753. When the "running/scalding continues," into late September, Thistlewood returned again to Old Sharper and received 3 quarts of his preparation, for which he paid 3 bitts. Thistlewood continued to drink Sharper's concoction until early October. See September 25, 1753; October 4, 1753.
[99] March 17, 1755.
[100] March 20, 1755. I have corrected Thistlewood's spelling. Original "coruncle."

As his condition progressed, Thistlewood began to supplement the diet drink with other well-known purgatives and external applications that he procured from unknown sources. "Continue drinking Old Sharper's diet drink mend very slow if at all," he reported nearly two weeks into his treatment. "The 2 caruncles which are about 1 ½ or 2 inches from the end of the penis give me great pain every time I make water," he continued.[101] Within days Thistlewood was taking jalap (for purging) and the occasional mercury pill in addition to the diet drink. When this combination offered him little respite, Thistlewood pursued more potent medicaments provided by John Gorse.

Though many opportunities to consult Gorse occurred when he first experienced pain, the overseer waited a full month before presenting his case to any of the white colonial doctors employed by John Cope and with whom he socialized. The extended illness of John Cope illustrates the frequency of contact between Thistlewood and the physicians whom he counted as his friends. In January of 1755 Cope became severely ill with a fever. As Cope progressed from bad to worse, Cope's friends called upon him to pay their respects. Dr. Frazier, who frequently dined at Egypt, visited Cope with his wife and children on the 21st of January. Three days later Dr. Duncan visited and dined at Egypt and also consulted on Cope's illness.[102] Dr. John Gorse visited in the interim, presumably to both attend to sickly slaves and call upon Cope. Shortly thereafter, Thistlewood "wrote to Dr: Gorse," alerting the physician that Mr. Cope desired his aid.[103]

Of all the doctors who visited the estate, Thistlewood most frequently saw the plantation doctor John Gorse. He attended the sick slaves on the Egypt estate at least once

[101] March 23, 1755.
[102] Between the period of January 1755 and February 1757, Dr. Frazier visited or dined at Egypt 23 times. Over the same period, Dr. Duncan visited or dined six times.
[103] January 27, 1755.

per week and consulted by letter on average of three times per week. Gorse not only diagnosed and administered medicine to sickly slaves but also ministered to Thistlewood and John Cope, as well as Cope's wife, Molly. Over the course of a twenty-six month period between 1755-57, Gorse visited Egypt 28 times, to either dine with Thistlewood and the Copes, to administer medicine to slaves, or to consult Thistlewood and the Copes on their illnesses. Even in instances when Gorse could not consult in person, his advice and medicine was never more than a day's distance away. In the same period under consideration, Thistlewood dispatched letters to and received much needed advice and medicine from Gorse on eight occasions. And in January and February of 1755, the months when John Cope had been dangerously ill and the period preceding the beginning of Thistlewood's bouts with venereal disease, Thistlewood had dined with or written to Gorse five times.

Gorse's authority stemmed from his ability to recommend and procure for Thistlewood both the harsher purges and mercurial-based therapeutics traditionally associated with the cure of venereal disease. Practical advice manuals and formal treatises alike asserted the idea that the key to curing venereal disease was to rid the body of the morbid matter before it advanced and became syphilitic. Patients and practitioners therefore sought combinations of treatments that through sweating, purging, and salivating would "flux" the morbid matter out of the body.[104] Although they disputed dosage and application, most eighteenth-century British practitioners agreed that mercury was the only effective treatment for venereal disease, particularly in its advanced syphilitic stages. Mercury's potency, however, prompted caution. And many early

[104] Porter, *Health for Sale,* 150-156.

modern people believed that it necessitated more prudence and supervision than other medicaments.[105] Under Gorse's supervision mercury became a principle component of Thistlewood's treatment. Much of Gorse's authority was based on the perception that, within the overseer's medical and social world, Gorse alone commanded the expertise necessary to oversee a patient's mercury consumption and to prescribe different devices and pills according to a sufferer's complaints.

Thistlewood was familiar with mercury. Indeed, he tentatively employed mercury previously, supplementing twice Old Sharper's diet drink with individual mercury pills. Yet the inefficacy of this combination and the deterioration of his condition most likely prompted him to seek Gorse's advice.[106] "Dr. Gorse here in the forenoon," Thistlewood reported on April 4, 1755, "applied to him as am not much better and feel oddly."[107] That evening, Thistlewood "rode to the bay," and procured a mercurial-based prescription.[108] Gorse's treatment initially involved mercury pills and a powerful electuary that Gorse had compounded specifically for Thistlewood. Gorse then sent Thistlewood " a pot off electuary," [tiny bits of medicine sweetened with honey or sugar] and "a note" presumably directing Thistlewood how to take it.[109] Gorse had initially focused on evacuating the morbid matter from within—prescribing pills and sending gallipots of electuary. Thus Gorse derived his authority not only from his knowledge of mercury, but in his ability to safely coordinate its use with other botanical treatments that he personally compounded for his patient.

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[105] Bynum, "Treating the Wages of Sin," 18.
[106] March 27, 29, 1755.
[107] April 4, 1755.
[108] *Ibid.*
[109] April 8, 1755.

Gorse began in mid-April to supervise the application of mercury through surgical applications and devices. When Gorse sent Thistlewood a fresh "pot off electuary," on April 18, he also included "a mercurial bougie to eat away the caruncle."[110] Because the internal ulcers that were said to accompany venereal disease caused the urethra to contract, many healers advocated anti-venereal candles. The medical and laymen's term for these mercurial ointment-coated candles was bougies, and they were coated with mercurial ointment and other household items reputed for their healing properties—red wine, olive oil, beeswax for example. Practitioners believed they eradicated the ulcers and dilated urethral strictures so as to offer the patient respite from painful urination. Patients were supposed to insert a bougie directly into the urethra.[111] The external treatment of symptoms was not new to Thistlewood. In the beginning of his illness, Thistlewood had combined the internal healing (the consumption of Old Sharper's diet drink) with the care of his own body. Attempting to heal the external manifestations of his illness on his own, the overseer applied household items, including a lead probe and rum, reputed for their astringent properties.[112] The failure of this combination of self-care and internal medicaments encouraged Thistlewood's turn to Gorse. The persistence of his symptoms that were externally perceivable on the surface of the skin necessitated a new round of self-care, this time with a mercurial bougie.[113] For the next two weeks, Thistlewood would combine the electuary with the bougie, initiating a period of healing that was a combination of Thistlewood's personal care of the body and Gorse's oversight.

[110] April 18, 1755.
[111] Merians, *Secret Malady*, 7.
[112] March 23, 1755; April 4, 1755.
[113] April 13, 1755.

Thus, as Thistlewood's symptoms transformed from aches and pains to growths he could perceive through the surface of his skin, his knowledge-making turned to his body's capacity to withstand different amounts of pain. Similar to mercurial pills and electuaries whose ingestion required caution, the mercurial bougie necessitated careful, incremental application. Although Thistlewood had previously experimented with other external and quite possibly painful remedies, the bougie represented a much more drastic and, if inserted or worn incorrectly, potentially destructive course of treatment. Thistlewood's careful scrutiny and responses to the bougie's effects spotlight the process by which patients personalized medical information according to their understanding of the capacity of their individual bodies and their threshold for pain.

Thistlewood's entries during the period he administered the bougie not only reminded him of the combinations of treatments he employed and their varied success, but the specific care of the body he personally undertook in order to safely achieve these results. He proceeded with caution. "At night *introduced* the bougie," he wrote on April 18, 1755. His verb choice underscores both that this was the first time his body would experience the new medicament and of the potential for undesirable, painful reactions.[114] Initially, Thistlewood restricted his use of the bougie to periods of inactivity. "Made use of the bougie, at night," he wrote on April 19, 1755. "Continue taking the electuary once pr: day, and every night introduce the bougie," he recorded the following day. Here, in addition to noting the combination of treatments he undertook, Thistlewood charted the conditions under which his body became habituated to the powerful therapeutic. This was part of a process of building up his tolerance of the bougie, as Thistlewood hoped to

[114] April 18, 1755. My italics. Thistlewood continued to use the same verb to describe his gradual accommodation to this painful device. "Every night introduce the bougie," he recorded on May 20, 1755.

eventually wear the device whilst undertaking great activity. "Wore the mercurial bougie in the field," he boasted a week later."[115] Part of the process of archiving the consequences of his personal bodily experiment, was to create a record of his daily bodywork.[116]

That Thistlewood's close observation and care of his body constituted such an important component of his use of the bougie, which was Gorse's prescription, alerts us to the important role of the patient in making medical knowledge and in effecting his cure within this formal economy of medicine. This bodywork was similar to that which Thistlewood had undertaken previously in efforts to eradicate his caruncles, but as we have seen, required greater caution, attentiveness, and a period of acclimatization to the powerful therapeutic. Thistlewood did not passively implement what Gorse prescribed and sent. Rather, he slowly introduced both the electuary and the bougie under conditions he deemed ideal, painstakingly charting his body's response to them. In so doing, he created an archive of his mercury treatment, the conditions under which it succeeded, the bodywork he personally undertook, and the varied outcomes of his trials. Once inscribed into his diary, Thistlewood could later consult these notes, pondering the conditions of past illness and its cure for information and instruction. Though Thistlewood was cured by May of 1755, he would apply this experience when he confronted venereal disease again in the following year.

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[115] April 25th 1755.

[116] The term "bodywork," is one coined by Mary Fissell and Kathleen Brown and demarcates the general care of the body as a vital component to the production of both health and civility in the early modern period. See Mary Fissell, "Introduction: Women, Health, and Healing in Early Modern Europe," *Bulletin of the History of Medicine,* 82 (2008), 1-17; Brown, *Foul Bodies: Cleanliness in Early America* (New Haven: Yale University Press, 2009), 5.

Thistlewood sickened again with venereal disease in September of 1756 and the period in which he experienced symptoms lasted five and a half months, ending mid-February of 1757. During this episode, Thistlewood relied first upon Mulatto Will, an enslaved healer who often came to the estate from Salt River to bleed and administer blisters to sick slaves and whites.[117] Mulatto Will's name indicated his racial and socially liminal status. Though he maintained intensive ties with the enslaved community, (he had a daughter with a woman who had once been enslaved), Will was a freedman. Prior to his death the doctor had Thistlewood compose a will in order to dispose of the considerable property the doctor had amassed—two cows and a horse.[118] Mulatto Will occupied a middling position within Thistlewood's healing hierarchy; he both procured and prescribed powerful botanicals as well as mercury treatments for Thistlewood and took directions from Gorse. His involvement in Thistlewood's second episode of venereal disease lasted two and a half months.

Thistlewood brought the knowledge gained from his past experience with venereal disease to bear on his interactions with Mulatto Will. Through his interactions with Old Sharper and Gorse, Thistlewood had perceived that purging and internal mercury treatments might head off venereal disease. And when he first perceived the return of familiar aches, he initiated his treatment, taking "a mercury pill," that he had procured, most likely from Mulatto Will. For the two and a half months, Thistlewood embarked upon a treatment comprised of jalap (a purgative), mercury pills, and

[117] August 29, 1753; October 10, 1753, March 28, 1753.
[118] On April 21, 1757 Thistlewood recorded that he "Wrote a Memoradum, how Mulatto-Will's goods are to be disposed off at his death: his wives shipmate Sylvia to have his cow, her daughter Hester the heiffer, Damsel his wiffe [Jimmy Hayes' wiffe] the Fille & rest off What he has; he desires to be buried at Salt River at his Mother (Dinnah's) right-hand, and that no Negroes Should Sing, &c."

electuaries. This treatment was undertaken under the auspices of Will, who provided Thistlewood with medicine and advice. Initially Will and Thistlewood attempted to heal his illness with a regime of purging and mercury. Will sent three doses of jalap and some mercury pills at each interval, as was consistent with English healing practices in which healers charged for visits not treatments. Given that Will expected to visit frequently, it made sense for him to parse out the pills slowly and bill for a visit. For example, on September 4, 1756 Thistlewood recorded that he "received from Mulatto Will 3 mercury pills 3 does of jalap."[119] On September 8th Thistlewood recorded again that he "received from Mulatto Will 3 mercury pills 3 does of jalap."[120] That Mulatto Will sent only enough for three doses at a time also suggests that he might have changed what he gave to Thistlewood in accordance with the information the overseer provided him about changes in his symptoms.

Though the combination ultimately offered him little respite, Thistlewood diligently charted his body's responses to it in the pages of his diary. On day two Thistlewood reported that the "soreness and running increases with other symptoms at night took a mercury pill."[121] On day three Thistlewood observed his urine burned, perhaps a sign that he was excreting the poisonous matter.[122] Thistlewood's symptoms did not abate, even after a week of jalap and mercury pills.[123] In many of these entries, Thistlewood was not only evaluating the efficacy of this combination. Meticulously recording his body's response to Will's treatment and observing each new symptom that

[119] September 4, 1756.
[120] September 8, 1756.
[121] September 5, 1756.
[122] September 6, 1756.
[123] September 11, 1756.

arose, Thistlewood engaged in a form of knowledge-making. His entries created a symptomology, unique to his person, which he could later consult for direction and information and that he would immediately communicate to his healers in order that they might better prescribe medicaments to alleviate his particular complaints.

Thistlewood's entries while under Will's care reveals the doctor carefully tailored his prescriptions according to the symptoms Thistlewood communicated to him. As Thistlewood's complaints transformed from general soreness to a burning sensation when urinating, Will supplemented the combination of medicine intended to expurgate the illness with what Thistlewood alternately referred to as a "cooling" or "Spaniard tea." Will procured this tea specifically to alleviate what Thistlewood described as a "scalding of urine in an intolerable manner."[124] Thistlewood continued to supplement his regime of jalap and mercury pills with the Spanish tea for another week and carefully documented his responses to it. "Scalding off urine continues think the running is somewhat tempered than before," he reported on September 21st, 1756.[125] "Have nothing to take however I think I find myself somewhat better," he cheerfully recorded four days later. In response Will sent him a "pot of electuary," the following day, presumably to maintain Thistlewood's turn for the better. Thistlewood continued to trust his condition to Will's care for almost another two months, but when his fever and aches and returned, he turned again to Dr. Gorse for a more potent course of mercury-based therapeutics.

Though Will maintained a great deal of interpretive authority, over the long course of Thistlewood's illness, the mulatto healer was frequently reminded of his middling position within the medical cosmos of the Egypt plantation. Dr. Gorse retained

[124] September 13, 1756.
[125] September 21, 1756.

the ultimate authority to diagnose and prescribe for Thistlewood's condition, a position that was further cemented by Gorse and Thistlewood's relations of elite male sociability. For example, Gorse, his wife, and others visited Thistlewood at Egypt for a full day in February of 1757. Though he "continue in mighty pain," he participated, dining and socializing. During the visit, Thistlewood sought Gorse's advice, who in turn suggested that Thistlewood supplement the "electuary and spikenard tea," Will had prescribed, with an enema, (what Thistlewood referred to as a "glister" in his diary). Accordingly, Thistlewood had Mulatto Will administer the enema that afternoon.[126] Thistlewood's recounting of who did the heavy lifting of the bodywork shows us the overlap between the interpretive and physical labor that socially liminal but occupationally prominent healers like Mulatto Will performed.

Sensory and material observation held an equally important place in Thistlewood's knowledge-making as his textural practice. Sensations informed his understanding of the severity of his condition and the effect of various therapeutics upon it. The instruments of evaluation he leveraged to assess his condition before committing an account of it in the pages of his diary were those associated with enslaved women's intimate and manual work. Sexual encounters constituted an important component of Thistlewood's investigation into the properties of venereal disease and the medicaments most successful in effecting its cure.

Thistlewood built his understanding about the transmission of venereal disease from the anecdotes he collected from other white males in the environs of the estate. As was typical of European beliefs during this period, the plot-points in all of these

[126] February 15, 1757.

narratives reinforced the idea of contagion's and venereal disease's one-way transmission from women to men. "William [Crookshanks] has a scalding of urine, is afraid its Clap," Thistlewood recorded in 1754, not long after he had first begun his employment upon the Egypt estate.[127] The following day Thistlewood lent William his mule so that he could ride to a nearby estate. In the evening he received a letter from Dr. Walker "who informs me William has got a confounded clap."[128] A white subordinate on the estate, Thomas Fewkes, "says little Lyde has clapped him confoundedly," he reported in 1757.[129] The patriarchical structures that subordinated women to men in Jamaican civil society also bonded men of different legal and racial status in terms of their assumptions about their rights to form sexual attachments with different women. At the same time, the stories Thistlewood recorded in his diary about the transmission of venereal disease between slaves under his power reiterated for the overseer that venereal disease passed primarily from women to men. When in March of 1757 Thistlewood learned that Lincoln an enslaved man had clap he made it a point "to have Egypt Susannah searched as Lincoln keeps her."[130] "Dr. Roberts told me yesterday," Thistlewood reported in 1758, "that Aurelia clapp'd Lowman."[131]

Throughout the course of his illness, Thistlewood continued to have sex with his enslaved mistress Phibbah as well as other slaves on the estate. He did so in part out of callous disregard for the effects of his actions but also because he was initially unsure whether to attribute his symptoms to venereal disease or a more general imbalance

[127] June 5, 1754.
[128] June 6, 1754.
[129] January 9, 1757.
[130] April14, 1757.
[131] November 26, 1758.

among his humors. Early modern men suffering from venereal disease experienced what venereologists referred to as "gleets" the "thin seminal matter [that] continually flows through the urethra."[132] As evidenced in his entries for September of 1756, Thistlewood's efforts to diagnose his illness as venereal disease turned on his investigation of the qualities of his ejaculate both during and independent of sex.[133] "Am almost afraid of a ___infection," he confessed in October of 1756, nearly a month after he described the painful sensations he experienced during sex with Phibbah.[134] In an entry that appeared the following week Thistlewood noted in addition to having sex with Phibbah in the morning he noticed a "warming of the semen when emitted, don't feel at all right."[135] "Sometime(s)," he mused shortly thereafter, "am afraid Phib should have been infected by me & returned it again sometimes imagine a pain in my back bones &c …..at other times imagine I have only got a cold."[136] Sex functioned as an encounter through which he diagnosed his illness, interpreted the progress or degeneration his condition and identified the origin of his clap.[137]

Consumer items associated with civility and intimacy doubled as informal tools of experimental inquiry. As Thistlewood well recognized, his personal linens—either his bed linens or lengthy long-skirted undershirt he wore folded over his genitals during the day and at night— registered his condition well before the overseer could record his impressions in the pages of his diary. Thistlewood fixated upon his linens as reliable

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[132] John Marten, *A Treatise on the Venereal Disease by John Marten, Surgeon* (London, 1711), 768; March 30, 1755.
[133] September 24, 1756.
[134] October 15, 1756.
[135] October 20, 1756.
[136] October 26, 1756.
[137] Sex maintained these functions in addition to that of a site for the enactment of tyranny over his bondspeople as Trevor Burnard has discussed in his *Mastery, Tyranny, and Desire: Thomas Thistlewood and his Slaves in the Anglo-Jamaican World*.

proxy for gauging his recovery in part because what they recorded was involuntary—night after night and day after day, they logged the semen, discharge, and other unidentifiable secretions that emanated from Thistlewood's body as he slept and worked. As such, Thistlewood's linens provided a means to gauge the severity of his illness in terms that were different from the overseer's bodily sensations. "Running and scalding of urine much as before, only am in hopes the running is not quite so malignant as before as it does not stain my linen so much…" Thistlewood reported as the first symptoms began to crop up again in September of 1756.[138] Then too, as Thistlewood undertook the cure of his illness, his linens constituted an important evidentiary basis for the evaluation of the effects of the medicaments he consumed. "A small running continues which stains my linen," Thistlewood noted with dissatisfaction after beginning Will's electuary.[139] "Run pretty much to day & stains yet," he continued a day later.[140] Yet if linens marked the onset of illness, they also proffered powerful evidence of Thistlewood's improvement and signaled that the overseer could forgo the harsher purgatives in favor of medicaments that maintained one's health. "The running now stains my linen very little, therefore took about 10 balsam caprivi drops in a spoonful of water in the morning," Thistlewood cheerfully noted a week later.[141]

Scholars have recently drawn attention to the role of linens and women's knowledge in legal evaluations of sexual transgression and Thistlewood's reliance on his linens as credible source information, that supplemented and at times supplanted his own subjective and experiential evaluation of the severity of his illness, supports the status of

[138] September 10, 1756.
[139] October 4, 1756.
[140] October 6, 1756.
[141] October 12, 1756.

linens as a powerful evidentiary tool in early modern legal and scientific cultures.[142] Within the informal social world of whites at the Egypt plantation, linens proffered powerful evidence of sexual impropriety. In 1756, John Cope forced himself upon the slave Beck within the bed he shared with his wife. Molly Cope was absent at the time. When Little Phibbah, a domestic slave, informed Molly of her husband's violence, Thistlewood reported that "Mrs. Cope also examined the sheets and found them amiss."[143] In this case the linens backed up the problematic testimony of an enslaved domestic and provided Molly with irrefutable physical evidence of Mr. Cope's transgressions. The laundering and repair of linens was women's work throughout the Atlantic world and it was difficult for Thistlewood to conceal his ailment, even from those with whom he was not intimate. In 1752, when Thistlewood's primary sexual relationship was with a slave, Jenny, Thistlewood paid Phibbah 4 bitts for "working my dirty linen for me." The bedsheets and underwear that Phibbah washed had likely absorbed the emissions Thistlewood produced when he had suffered with venereal disease during the previous three weeks.[144] Bed linens at Egypt not only marked sexual violence but also incivility. "Last night Mr. Mordiner had a bedfellow dirty'd the bed with her dirty skin," Thistlewood reported in his diary with a tone of fascination and disgust.[145] Mordiner was another overseer who worked and resided on the Vineyard pen, Thistlewood's former place of employment. Thus the appeal of linens as a tool of evaluation in Thistlewood's

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[142] As their frequent appearance in early modern courtrooms as incriminating evidence of abortion, infanticide, rape, and premarital sex makes clear, linens recorded a host of transgressions that were often sexual in nature. See Corneila Hughes Dayton, "Taking the Trade: Abortion and Gender Relations in an Eighteenth-Century New England Village," *William and Mary Quarterly,* 48 (1991), 19-49; Laura Gowing, *Common Bodies: Women, Touch, and Power in Seventeenth-Century England* (New Haven: Yale University Press, 2003); Brown, *Foul Bodies: Cleanliness in Early America*.
[143] May 5, 1756.
[144] September 30, 1752.
[145] November 11, 1756.

illness derived both from their standing as a common evidentiary source within early modern socio-legal culture and their salience within Thistlewood's private world.

The agricultural diary then functioned as both a lab book and a map of the social relations of healing and experiment with which the overseer contended. The diary allowed Thistlewood to measure the outcomes and efficacy of different recipes for the cure of yaws endorsed by the white men with whom he socialized. It also allowed him to keep track of the diet drinks, mercury treatments, and botanical medicaments and compounds he used during his own struggles with VD. The material practices of inscription were vital to the type of consumer-based knowledge Thistlewood amassed as he gathered information, materials, and stories from local healers.

Conclusion

The differentiated social power of enslaved people and middling whites determined how they experienced venereal disease. Because enslaved sufferers tried to avoid encounters with European methods for treating venereal disease, including yaws, the majority of enslaved peoples' therapeutic resources and medical activities did not reach the purview of white overseers. Sources like the Thistlewood diary suggest that the therapeutic armamentarium overseers consulted in the treatment of venereal disease was constantly subject to slight modifications. Managerial staffs' frequent interactions with other whites meant they were always receiving advice, information that might overturn or augment practices already in-place and what overseers already knew from their personal encounters with venereal disease. Thistlewood's initial responses were systematic and rigid. He relied heavily on the expertise and labor power of other healers, practitioners, and caregivers. He alternatively forced slaves to submit to the European medical world of

chemical therapeutics provided by plantation surgeons, shipped them off in canoes to seaside estates for botanical remedies and caregiving from enslaved adepts, or sent them by mule or foot to the Egypt plantation's parent estate at Salt River—a location that had the resources to care for ill slaves suffering from yaws and other types of venereal disease in greater numbers than was possible at Hill or Egypt. Enslaved patients' status as slaves shaped their encounters with illness and the related process of knowledge-making that developed out of their interactions with practitioners in these episodes.

The entries in Thistlewood's diary illustrate the existence of a heterogeneous arena of healing, advice-giving, and bodywork thriving in plantation Jamaica, one populated by male enslaved healers, free colored adepts, female slaves providing caregiving and bodywork, plantation surgeons, and white women. Scholars of slavery have mined the historical record to spotlight the participation of enslaved midwives, botanists, obeah-men and women in medical and bodily care on plantations alongside white surgeons, physicians, and practitioners with varied levels of education and practical experience, spotlighting the plantation Caribbean's near total reliance upon the botanical know-how of enslaved healers. This chapter has aimed to reconstruct the underlying logic that drove overseers like Thistlewood as well as enslaved suffers to call upon different medical personae when they did and what results they expected from these interactions.

The supervision of enslaved peoples' ailments—the selection of the practitioners involved in their cure, the reduction of their workloads, and their sequestering in specific spaces on the estate—involved a process of learning. Between 1752 and 1755 Thistlewood's responses were that of an improvisational yet coercive intermediary, one deputized to coordinate the treatment of slaves' illnesses from a variety of healers.

Between 1756 and 1759, however, he drew more heavily from his own repertoire of experiences. Depending on the ailment, he drew from one of three primary healers and often supervised and administered medicines himself. The evaluation of the capacities and areas of expertise of different healers as well as the efficacy of diverse cures constituted a component of enslaved peoples' and white managerial staff's knowledge making. Instead of assuming that enslaved patients and whites consulted with different healers and used specific cures because of their availability, this chapter has examined how patients generated information about healers and their varied capacities in order to argue that patients' pursuit of a particular treatment was the product of knowledge generated through previous encounters.

What Thistlewood learned about the treatment and behavior of different forms of venereal disease was the product of his participation in an agricultural regime that used specific record-keeping practices to determine the relationship between production, profits, and the allocation of slaves' labor. From the mid-eighteenth century onwards, white managerial staff began to use these paper technologies to capture how slaves' time was best exploited. Thistlewood's entries documenting the appearance and behavior of venereal disorders among slaves were shaped by imperatives to document how slaves' time was used. The type of knowledge that emerged from coerced labor relationships was highly attentive to the typical duration of these ailments and their effects on slaves' capacity for work as they were concerned with the virtues and relative efficacy of different plants and the competency of the healing agents recommending them. Thistlewood's entries as a result described the onset, sensation, and location of various symptoms and the length of time that disabling ulcers as well as painful sensations

impeded work. Entries in agricultural diaries documented the measures that enslaved patients and overseers took to eradicate their disorders, including the practitioners they consulted, the cures they implemented, the self-care they performed, and the efficacy of various healers and therapeutics they pursued. An illness that prevented a slave from working thus subjected that patient to the constant surveillance—their adherence to medicines, dietary regimes, as well as their interactions with others—that, in turn, provided information about the basic properties and characteristics of the disorder they suffered from. A sustained focus on the encounters between Africans and Europeans in a context of coerced labor relations specific to time and place—Caribbean agricultural regimes organized around enslaved peoples' labor—show us how those relationships informed knowledge-making.

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Chapter Two:
"To Direct Physics and Regimen by Latitudes": The Emergence of Body Management in the Greater Caribbean

Introduction

In 1774 the Philadelphia scientist Benjamin Vaughan, who was discussed briefly in chapter one, composed a lengthy missive titled "Letter of Advice from B.V. to a younger brother who was upon the point of embarking to Jamaica," and sent the guide to Charles Vaughan. Charles was Benjamin's youngest brother and he would soon venture out to the West Indies to manage the family's sugar estates and livestock pen in St. James Parish, located in the northwest corner of the island.[1] "Health is a principal consideration for yourself and negroes," Benjamin wrote to Charles in a section on the administration of the estate's enslaved people. "Moisture in the earth and heat united being the chief source of tropical diseases," Benjamin continued, "you must be prepared for the wet season and shun every morass or damp place to Windward." "How the negroes are to be relieved from their disorders in the mountains, I know not," Benjamin lamented. "But," he closed, "as these differ from the plains in having frequent rains, new land, sudden changes, and cold nights, the prerequisite precautions seemed to be a difference of housing, clothing, and turning out; in which experiment and good sense must direct you."[2] When Benjamin directed Charles to these specific elements of what he understood

[1] The family owned two sugar plantations, Flamstead and Crooked Spring, as well as an animal pen (presumably the "mountains" that Benjamin referred to in his letter, which produced guinea grass and small quantities of coffee. For extensive info on the size of the family's estates see M. 180.1 Charles Vaughan Papers, Box 1, F.2 Bowdoin College Special Collections, Brunswick, ME (hereafter Charles Vaughan Papers).

[2] Benjamin Vaughan to Charles Vaughan, October 24, 1774. Benjamin Vaughan Papers, Series II, Box 1, American Philosophical Society, Philadelphia, PA (hereafter Benjamin Vaughan Papers). Underlining in original. By "turning out," Benjamin referred to the time of day (around dawn) that slaves began their work. The time of day that work began could affect slaves' health because excessive moisture in the air combined with perspiration, Benjamin believed, created illness. He therefore suggested that Charles

would preserve slaves' health—the manipulation of the air and the management of slaves' exposure to the elements—his counsel reiterated strategies that circulated widely among planters. These practices dictated how to distribute a plantation's financial resources in the administration of an estate's human capital. Instead of allocating income to medicines in order to resurrect sickly slaves struggling under various ailments, planters and plantation advice authors advocated for preventative medicine, a category of medicine that encompassed the manipulation of the non-naturals.

To understand what the non-naturals were and their place within popular medical about preventative healthcare requires a brief visit to the early modern, European world of health and healing. Early modern medicine differentiated between the natural substances constitutive of a person's body—the humors, faculties, elements, and spirits—and those components of daily living that were external to it—the non-naturals. The term non-naturals did not refer to artificial substances. It instead encompassed six components, external to the human body, that a person dealt with on a daily basis, such as air/environment, food/drink, motion/rest, sleep/waking, repletion/evacuation and matters of the soul (strong emotions and passions), and which could impinge upon an individual's health (their natural state of being). Non-naturals encompassed elements that were, if misused, potentially *contra* nature, or, in other words, detrimental to the fundamental nature of an individual human body. Officers and planters sought to preserve slaves' and other dependents' health through the regulation of the non-naturals. In the eighteenth

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determine when the concentration of water vapor in the air was at its highest and lowest in the morning in order to determine the safest (and driest) hour when slaves should begin their workdays.

century expertise in the manipulation and counsel of non-naturals formed a branch of medical knowing referred to as hygiene.[3]

Intervening in slaves' habitations, provisions, clothing, and movement patterns, planters and overseers operated according to three premises prevalent in early modern thinking about hygiene: that illness or an ailment was produced by humoral disequilibrium; that slight humoral imbalance increased a person's susceptibility to environmental ailments; and that if one was in danger of becoming humorally unbalanced, it was necessary to change one's interactions with various non-naturals in order to sustain humoral balance (or good health). Planters as well as commanders and officers embraced the maxim to "live well, live regular," but adapted the idea of regularity expressed in this adage to justify uniformity in their treatment of dependents' bodies.[4]

This chapter uses plantation management texts, correspondence between plantation managerial staff and absentees to document the different ways in which these groups sought to promote the health of Afro and Afro-Caribbean field slaves through the manipulation of the non-naturals. In this chapter, I use materials from the archive of plantation slavery and that of military and naval history in the Caribbean in order to position the British West Indian garrison as an important resource for planters. I thus draw as well from vernacular army medical-advice texts aimed at officers and naval commanders. The British military was the first institution organized around the coercive

[3] Heikki Mikkeli, *Hygiene in the Early Modern Medical Tradition* (Helsinki, Finland: Academia Scientiarum Fennica, 1999), 10-11.
[4] John Rollo, *Observations on the Diseases which appeared in the Army on St. Lucia in December, 1778; January, February, March, April, and May, 1779* (London, 1781), quote to "live well, live regular," p.155.

organization of men's labor to articulate the medical knowledge specific to superiors ministering to laboring dependents in the torrid zone.

I refer to the strategies that plantation managerial staff and military superiors charged with the care of dependents pursued throughout this chapter as body management. This term encompasses the methods that both planters and officers implemented to encourage health among dependents. Planters conceptualizing the preservation of slaves' health in terms of body management focused on two non-naturals: food/drink and air/exposure. The way that their interest in air/exposure was expressed in specific practices included efforts to limit slaves' exposure to noxious vapors that emanated from decaying vegetable matter, to experiment in the quantity and type of textiles they provided; the reduce the hasty movement of bondspeople from one microclimate to another, and to confine slaves at night in order to circumscribe nighttime movements that exposed slaves to debilitating atmospheric vapors.

The term body management encompasses the attempt to develop a rational and replicable set of rules to manage the health of large numbers of dependents but the term is also used in this chapter because it replicates the language that planters and other superiors used in pamphlets and letters to reference the disciplinary components of health management.[5] Writing in the introduction of his plantation advice book, the absentee planter David Collins described his "system of management"; Lieutenant-Colonel Gillespie of the 20th Light Dragoons argued for the necessity of a "system and general

[5] I use the term "body management," to differentiate systems of structured care and hygiene from ones oriented towards the cure of illness (therapeutics) and because this phrase incorporates the surveillance inherent in the hygiene regimes imposed on enslaved labor forces.

outline of conduct" for officers to observe while in Jamaica.[6] Conducting forensics on high mortality among British soldiers who had invaded Havana during the Seven Years' War, the Lieutenant-General David Dundas surmised that "West India climates seem sufficiently healthy" to permit supervisors to follow a "regular and quiet system."[7] The language of paternalistic necessity that planters and plantation managerial staff invoked when laying down the routines to sustain dependents' health suggests they associated the top-down supervision of slaves health with the paternalistic forms of governance that prevailed in the British military. The two institutions held up the reciprocal obligations of patriarchy—officers' and planters' responsibility for dependents' well-being and infantrymen's and slaves' submission to their commands—to imply that this form of hierarchy would achieve the discipline and conformity among unruly infantrymen and slaves necessary to sustain their health.

The promise that illness could be thwarted through the attention to hygiene appealed to planters and overseers because it potentially reduced the outlays they associated with therapeutics: the expensive, individuated, and time-consuming practices necessary for the treatment of illness. The financial burdens associated with the treatment of illness as well as the perception that the cure of specific ailments was a specialist knowledge of healers made projects to improve slaves' health a cheaper and more financially wise option than the allocation of funds for the importation of expensive pharmaceuticals and/or visits from local plantation surgeons and enslaved adepts.[8] Most

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[6] David Collins (1803), 9; Lieutenant-Colonel Gillespie, *A General Outline of the Standing Orders and Regulations to be Observed by the XX Light Dragoons, Whilst in Jamaica* (St. Jago de la Vega, 1800), 5.
[7] Lieutenant-General David Dundas's Memorandum on the Capture of Havana (1800), in the National Library of Scotland, reprinted in David Syrett, ed., *The Siege and Capture of Havana 1762* (London: Spottiswoode, Ballantyne, and Co. Ltd., 1970), 323.
[8] Plantation surgeons charged annually per head to take general care of slaves. But they also charged additionally for individual visits, as when they were called out to an estate to attend individual patients with

overseers and planters lacked the know-how governing the administration of medicines to patients of different ages, sexes, and strengths.

Planters' ignorance in the arena of healing was not limited to the properties of different therapeutics and their administration. In quantity, planters did not purchase drugs in a manner that was anywhere near the other commodities they acquired and believed necessary for the construction and maintenance of a plantation.[9] One reason for this stems from the impoverished state of plantation owners' consumer knowledge about the transatlantic drug trade. In the West Indies, only druggists purchased pharmaceuticals in large quantities.[10] And drugs were shipped on vessels whose main purpose was to carry high-volume trade items. The costs of transporting medicines for individual plantations was a disincentive to investing in medical cures as a means to sustain slave populations. Absentee planters and their attorneys (their on-the-ground agents) ordering supplies from overseas consignment firms got more value from the materials of preventative medicine that merchants consigned in large volumes, such as textiles,

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specific illnesses. See for example the medical ledger of the Jamaican plantation surgeon Alexander Johnston: Medical Record 1758-1773, Powel Family Papers, Collection 1582, Vol. 342 and 343, Historical Society of Pennsylvania and that of the Robert Nesbitt, physician in South Carolina, Accession # 4754, South Caroliniana Library, Columbia, South Carolina; Barwick Bruce Day Book, MS 1996.11, Medical Record Book, Box 6, Rockefeller Library, Williamsburg, Virginia. The Jamaica resident JB Moreton estimated that plantation surgeons typically received around 5 shillings per head and made around £100-150 per year per single estate. JB Moreton, *West India Customs and Manners* (London, 1793), 21. See also Douglas Hamilton, *Scotland, the Caribbean and the Atlantic World, 1750-1820* (Manchester: University of Manchester Press, 2010), 120-1.

[9] See for example the receipts that the Jamaican absentee planter James Chisholm received from consignment firms from whom he ordered provisions for the Trouthall Estate in Jamaica between 1771-83, as well as his annual supply lists and list of cash payments expended for the estate's contingent expenses in Chisholm Family Papers, MS 5465, 5466 and 5480, National Library of Scotland, Edinburgh (hereafter Chisholm MS).

[10] This claim is based on preliminary analysis of the London-based pharmaceutical chemist Thomas Corbyn's letterbook. See Corbyn & Co. Chemists and Druggists, MS. 5441 and 5441, Wellcome Institute for the History of Medicine, London. The economic contours of the Atlantic drug trade is a literature that is still evolving and the recent dissertation of Zachary Dorner, "Manufacturing Pharmaceuticals, Credit, and Empire in the Eighteenth-Century British Atlantic," (Ph.D. Dissertation, Brown University, 2016), offers promising insights.

lumber, and foodstuffs. These items' longstanding prominence within Atlantic economies of scale and within commercial networks organized around their overseas transport (between the suppliers of these items, mercantile houses, and shipping consigners) additionally strengthened the confidence that planters and attorneys held in their capacity to purchase these items knowledgeably. All of these factors made dietetics/ hygiene a cost-effective and appealing site of experiment.

Historians of plantation slavery in the late-eighteenth century Greater Caribbean have demonstrated that plantation owners sought to ameliorate the conditions of slavery not by allocating more resources towards the purchase of medicaments or the treatment of illness but through increases in expenditures in various categories of hygiene, namely the clothing, housing, and provisioning of slaves.[11] Yet this literature assumes rather than investigates how planters and managerial staff decided to focus their resources in foodstuffs, clothing, and habitations. In examining how planters learned techniques of body management this chapter makes the case that the routes they pursued to keep slave populations healthy were far from self-evident. Planters experienced a learning curve in terms of the merchants from whom they should import articles such as foodstuffs and

[11] Stephanie Bergman and Frederick H. Smith, "Blurring Disciplinary Boundaries: The Material Culture of Improvement during the Age of Abolition in Barbados," *Slavery and Abolition,* 35 (2014): 418-436; Michael Craton, *Searching for the Invisible Man: Slaves and Plantation Life in Jamaica* (Cambridge, MA: Harvard University Press, 1978); Christa Dierksheide, *Amelioration and Empire: Progress and Slavery in the Plantation Americas* (Charlottesville, VA: University of Virginia Press, 2014); Dave St. Aubyn Gosse, *Abolition and Plantation Management in Jamaica, 1807-1838* (Kingston: University of the West Indies Press, 2012); *Ahmed* Reid, "Sugar, Slavery, and Productivity in Jamaica, 1750-1807," *Slavery and Abolition,* 37 (2016): 159-182; Mary Turner, "Planter Profits and Slave Rewards: Amelioration Reconsidered," *West Indies Accounts: Essays on the History of the British Caribbean and the Atlantic Economy in Honour of Richard Sheridan* (Kingston: University of the West Indies Press, 1996), pp. 232-252; Sarah Turner, "Homegrown Slaves: Women, Reproduction and the Abolition of the British Slave Trade, Jamaica 1788-1807," *Journal of Women's History,* 23 (2011): Lorena Walsh, *Motives of Honor, Pleasure, and Profit: Plantation Management in the Colonial Chesapeake, 1607-1763* (Chapel Hill: University of Virginia Press, 2010), 623, 627; J.R. Ward, *British West Indian Slavery, 1750-1834: The Process of Amelioration* (New York: Oxford University Press, 1988).

building supplies as well as the quantity. One source of information came from the British military and the Royal Navy, institutions which, during the Seven Years War, had surmounted their own stumbling blocks in their efforts to keep soldiers and sailors healthy during extensive sieges and protracted land campaigns. In the aftermath, military surgeons generated a specialist literature that prescribed policies and practices that would keep soldiers and sailors laboring in hot climates healthy.

The findings here about the porousness between military and plantation preventative health ideas complicate what scholars have argued about the history of race and its hardening at the end of the eighteenth century. The argument that scholars make about the bifurcation of black and white into two discrete racial species based on notions of impermeable bodily difference is derived largely from the manuscript papers and printed texts that imperial governors, British generals, and pro-slavery writers produced at the end of the eighteenth-century. In the wake of fever epidemics, these groups compared African and European bodies and the detrimental effects that the rapid relocation from the temperate environments of Europe to the torrid zone had upon the health on Europeans. Military generals and pro-slavery groups pointed to climate as the determinate non-natural that explained differential disease susceptibility between African-born people and Europeans to fevers. This argument allowed planters to legitimize both the perpetuation of African-based slavery in an era when its morality was under attack and it enabled British generals to advocate for the use of African and Afro-Creole males to perform unskilled labor in the British Army. Whether they were arguing for the necessity of continuing to use slaves imported from Africa or raising regiments manned by African and Afro-Caribbean slaves, the generals and pro-slavery writers who

paraphrased from medical pamphlets on fever did so fully aware of the biopolitics that their selective reading advanced.[12]

Yet the deliberateness of colonial governors, British generals, and pro-slavery factions in selecting climate of origin to justify their arguments for African and black laborers has gone little noticed by the scholars making use of these texts because the prominence and volume of these manuscripts in the archive of the Anglophone Caribbean. Their volume muffles second-order texts whose authors considered a wide range of external inputs that would impair Europeans', Africans' and Afro-Creoles' health. The archival conspicuousness of pro-slavery writers' voices also enhanced the evidentiary basis for the scholarly claim that ideas about race and bodily difference hardened at the end of the eighteenth century, creating a historiographic feedback loop that encouraged scholars to investigate the medical history of the British West Indian garrison and that of the plantation Caribbean separately.

This chapter highlights the strategies for the preservation of dependents' health that evolved in the literature on plantation management and that which appeared in texts whose authors tried to familiarize officers with medical dangers they would have to circumnavigate in the West Indies. In so doing this chapter documents the evolution of strategies of body management and the ways in which these two institutions informed one another over a sixty-year period between 1750-1807, an era when planters' attention to slaves' health intensified. Until British Parliament's 1788-89 investigation into the

[12] See for example William Rickets' arguments for raising a regiments comprised of free blacks in Jamaica in 1778. Rickets argued that Africans and Afro-creoles were "used to the climate and enured to labor and fatigue," in Petition of W.H. Rickets to Assembly of Jamaica, October 30, 1778 CO 140/60, National Archives, Britain. Rickets quoted in Andrew Jackson O'Shaugnessy, *An Empire Divided: The American Revolution and the British Caribbean* (Philadelphia: University of Pennsylvania Press, 2000), 176.

condition of slaves on West Indian estates, planters were only marginally concerned with the health of slave labor forces. But the amelioration movement triggered by the investigation and the concurrent expansion of lobbyists working to abolish the slave trade prompted the owners of West Indian estates to attend more seriously than they had to the health of slave populations. This was also the period when the ideas about health in the torrid zone that planters and military officers produced began to parallel one another, a synergy, that occurred because the two managerial groups were both responsible for large numbers of dependent laborers. Examination of the different genres of body management texts reveals a broadly similar set of practices. This aggregate analysis of management texts reveals a way of conceptualizing soldiers and slaves, which officers and overseers developed, as *laboring populations,* ones differentiated by the specific environmental hazards they faced.

Approaches to body management in the West Indies had two defining features: the knowledge created within this system was consumer driven and oriented towards a scalar model of health. Dietetics formed the basis of health for much of the early modern period (what to eat, when, and how was a major focus of learned and lay medical thought). Food provisions in the eighteenth-century Atlantic were enmeshed in larger inter-imperial rivalries, and the provisioning of slaves was an object of great attention among planters, plantation management authors, and anti-slavery activists during the last quarter of the eighteenth century. Much of the advice purveyed in the plantation-advice texts examined in this chapter concerned how to acquire food from overseas sources, what to grow in provision grounds, and how to prepare new articles of substantive foodstuffs introduced from abroad or from the French Caribbean. Body management thus

essentially provided these groups with know-how that was medical and economic in that it facilitated readers' engagement with Atlantic mercantile economies. Because it familiarized planters and attorneys with the nuances of participating in an Atlantic provisioning economy that operated on a large volume, Caribbean iterations of hygiene also enabled managerial staff throughout the West Indies to manage the health of large laboring populations.

This chapter contains three parts. The first section analyzes the ideas of populations and medicine of scales as they were articulated in plantation and military advice manuals. Section two shows how agricultural advice writers and plantation managerial staff distinguished between seasoned and unseasoned slaves and how these groups argued that the two categories of slaves had different constitutions. This section also describes the different practices that planters developed to sustain the health of both seasoned and unseasoned slaves. Finally, section three shows the evolution of parallel concerns with soldiers' and slaves' atmospheric environments and dependents' exposure to different forms of air. Section three makes the case that the practices associated with body management on West Indian plantations were based on similar techniques of surveillance and control prevalent in British military forces. In spotlighting congruency in the military's and plantation complex's strategies for controlling the movements of laboring dependents, this final section makes a case for the ways in which the two labor regimes' proximity to one another in the Caribbean facilitated the elaboration of each institution's techniques for producing and managing populations.

I. *A Medicine of Scales*

A distinctive vision of enslaved sufferers undergirds the advice Benjamin Vaughn gave to Charles and that reiterated in numerous plantation management texts. These texts positioned an estate's slaves as a single population to be managed rather than individuated patients. Unlike the understanding of patients in the British Isles, where practitioners sought to treat illnesses that were unique in their presentation and cause to the individual patient, authors' recommendations glossed over differences in the idiosyncratic constitutions, as well as the sex, age, and strength of the enslaved people suffering from illness on a plantation. The framework undergirding the counsel given in plantation management texts mirrored the one that structured how West Indian attorneys conceptualized the organization of labor on sugar estates. Planters, as well as military and naval officers supervising dependent sailors and soldiers, envisioned the dependents under their command as large populations to be managed as organic wholes.

Health existed alongside labor organization and discipline as one of several ways of managing a plantation's human capital, all of which presumed a large scale. In the organization of work, for example, managers of sugar estates in the mid-to-late eighteenth century divided individual slaves into labor gangs, groups that were differentiated by their collective dexterity with specific tasks. In this framework, attorneys and overseers conceptualized the gang as a "unitary organism" whose strength fluctuated and depending on the physical capacity of its individuals.[13] Just as the gang labor system conceptualized slaves as members of groups that could collectively perform specific tasks, the rules governing the preservation of health in the Caribbean framed an

[13] On West Indian managers' conceptualizations of enslaved labor gangs see Justin Roberts, *Slavery and Enlightenment in the British Atlantic* (Cambridge: Cambridge University Press, 2013), 132-148.

estate's slaves as a population whose health could be managed through uniform interventionist measures. Planters' efforts to improve the health of slave populations concentrated on food, housing, clothing, and morality (and in that order).

At mid-century planters received information related to the preservation of field slaves' health primarily from printed agricultural and plantation management texts. [14] These texts grew in quantity as the century wore on, particularly after the Seven Years' War, when, in response to the expansion and maturation of the sugar economy in Antigua and Jamaica, experienced planters composed new plantation advice texts. [15] Prior to this period, planters relied on personal experience and word-of-mouth advice. They might also have encountered a Barbadian manuscript, "Henry Drax's Instructions for My Plantation."[16]All of these texts provided the basics in the cultivation of sugar. They also

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[14] Mid-Century Agricultural advice manuals include: William Belgrove, *A Treatise upon Husbandry or Planting. By William Belgrove. A regular bred, and long experienc'd planter of the island of Barbados* (Boston, New England, 1755); Samuel Carey, "Plantation Instructions," (1757), MS. N-1997, Massachusetts Historical Society; Samuel Martin, *An Essay upon Plantership, Humbly inscribed To all the Planters of the British Sugar-Colonies in America* (London, 1750).

[15] After the Seven Years War, West Indian agricultural advice manuals proliferated. Experienced planters began to adapt new scientific theories relating to soil chemistry then emerging from the British Isles to the varied terrains and environments of the West Indies. Post-Seven Years War texts include Clement Caines, *Letters on the Cultivation of the Othaheite Cane: The Manufacture of Sugar and Rum; the Saving of Melasses; the Care and Preservation of Stock; with the Attention and Anxiety that is Due to Negroes* (London: 1801); John Dovaston, "Agricultural Americana: Or Improvements in West-India Husbandry Considered wherein the present system of Husbandry used in England is applyed to the cultivation or growing of sugar canes to advantage" (1774), Codex, Eng 60, Vol, 2, John Carter Brown Library; Philip Gibbes, *Instructions for the Treatment of Negroes* (London: 1786); Patrick Kein, *An Essay Upon Pen-Keeping and Plantership* (Kingston, Jamaica: 1796); Edward Lascelles, *Instructions for the Management of a Plantation in Barbadoes* (London, 1786); Joshua Peterkin, *A treatise on planting, from the origin of the semen to ebullition; with a correct method of distillation* (St. Christopher's : printed by Edward Luth[e]r Low, Basseterre, 1790); Gordon Turnbull, *Letters to a Young Planter; Or Observations on the Management of a Sugar Plantation* (London, 1785).

[16] The Drax manuscript was a foundational West Indian agricultural text. For its contents see Peter Thompson, "Henry Drax's Instructions on the Management of a Seventeenth-Century Barbadian Sugar Plantation," *William and Mary Quarterly,* 66(July: 2009): 565-604. Drax's manuscript, written around 1670, is the only seventeenth-century West Indian agricultural advice text that has survived and evidence suggests that it was recopied twice. Two copies exist in the Bodleian Library at Oxford. See "Instructions which I would have observed by Mr. Richard Harwood in the Management of my plantation…" Rawlinson MSS A348, fol.10v, Bodleian Library, University of Oxford. Drax's instructions exerted influence well into the eighteenth century, as authors and compilers cut, pasted, and amended portions of Drax's work in their manuscript and printed plantation management manuals. The plantation management author William

contained cursory sections on the "treatment of stock and new negroes," and the duties of estate managers and overseers. Lengthy sections addressing techniques to improve crop yields, including manuring and ploughing methods believed to enhance soil-fertility, far outstripped in volume discussions on the care and preservation of enslaved populations.

Reflecting assumptions that the slave "gang" was the most important object of intervention, plantation management texts argued that the reduction of the gang's labor and exposure to wet weather was the best means to improve an estate's overall productivity and sustain its extant slaves. In his discussion on the use of manure as a fertilizer, for example, the Barbadian William Belgrove (who borrowed heavily from Henry Drax's seventeenth-century manuscript) warned planters against "making more dung in one heap, than will serve two acres, lest you increase the labor of your slaves."[17] Some authors advocated innovations on the grounds that their new techniques reduced the total weight of various materials that slaves would be forced to convey to different fields (or cane pieces) during the planting and harvesting of crops. The Antiguan Samuel Martin advised planters to acquire carts and oxen because it would minimize the number of enslaved workers used to transport various heaps of manure, cane trash, and dirt between different fields in the estate. "By that means," he wrote, "two negro men will load a cart with earth or dung in less time than ten women can do with baskets according to the present custom."[18] The implicit argument here was that ameliorating the

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Belgrove, for example, included Drax's manuscript as an appendix to his plantation management book. Belgrove wrote that he included Drax's instructions, because he believed it would "render my treatise valuable." See Belgrove, *A Treatise Upon Husbandry or Planting by William Belgrove* (Boston: 1755), 50-86. In his discussion on the treatment of illness, Philip Gibbes directly copied from Drax's manuscript. See Gibbes, *Instructions for the Treatment of Negroes* (London: 1786), 91. For the circulation and influence of the Drax manuscript see Roberts, *Slavery and Enlightenment,*42-44.

[17] Belgrove, 9.

[18] Martin, 29.

arduousness of slaves' labor would improve an estate's productivity by strengthening slaves' productive capacity.

Additionally, authors devised new methods for arranging the estate and harvesting crops so as to reduce the time slaves spent walking between fields and exposed in wet weather. "Always stake your cattle as near as possible to the place where you are cutting," Clement Caines advised. "By this means," he continued, "you save the labour of carrying to a distance large bundles of tops and diminish the toil of your slaves, which is among the objects of greatest consequence in the opinion of the humane master and in the cultivation of West Indian estates."[19] Martin recalibrated the organization of sugar estates, recommending planters divide their estates "into three, four or five equal parts, in proportion to his strength of hands and cattle, allowing one third, fourth, or fifth part to be planted every year..." If the planter implemented this scheme and "contrives to cut plants away from a continuous field," Martin surmised, "much cartage in wet weather will be prevented, much of his negroes' time saved in passing from one distant field to another." "Still more," he continued, "if mules are employed to carry plants." Innovations in soil fertility, crop production, and harvest methods were all touted as having secondary benefits of mitigating the working conditions of slaves and improving their health. In his 1757 manuscript titled "Instructions for running a sugar plantation," the absentee planter Samuel Cary, urged his overseers to make sure that his slaves were "well fed, and to be sure never to work them beyond their strength, always remembering that fair and easy goes far in a day," a directive that evidenced the connection between the reduction of

[19] Caines, 17.

excessive toil and greater productivity.[20] The argument that slaves' health would be improved through advances in agricultural techniques was implicit; the boon to slaves' health was achieved through the implementation of techniques that would reduce the amount of time and effort slaves expended cultivating agricultural staples.

Another strategy reflecting the scalar elements of plantation body management regimens was the attention planters and advice authors gave to foodstuffs, on the grounds that health could be achieved across an estate through provision of adequate quantities of aliments. "Every man then who wishes to grow rich with ease, must be a good economist; must feed his negroes with the most wholesome food, sufficient to preserve them in health and vigor," the Antiguan Samuel Martin instructed in 1750.[21] The St. Vincent author David Collins attempted to neutralize debates on the "qualities of different kinds of food," and rehashed the maxim that "a man in health may be kept up to the extremity of his plumpness by almost any kind of food."[22] In stressing provisioning, authors built upon techniques honed in Henry Drax's manuscript, in which the Barbadian hailed the kitchen as a source of health and cure.[23] "The kitchin being more useful in the recovering and raysing of negroes than the apothycaries shop," Drax intoned in his two sentences addressing plantation medicine. The two areas of healing "do well together," he continued, "but physic alone without the helpe of what the other affords does rather

[20] Massachusetts Historical Society, MS. N-1997, Samuel Cary Papers Collection, Samuel Cary, *Instructions for Running a Sugar Plantation* (1757), no page number given.
[21] Martin, 10.
[22] Collins, 94.
[23] Eighteenth century plantation management authors cited it to ground their innovations in the authority of tradition, even as they clandestinely transformed Drax's original instructions by adding sections on the organization of labor or the harvesting of cane that were not in the original manuscript. See Roberts, *Slavery and the Enlightenment,* 42-43.

destroy than assist nature."[24] Much of the explicitly medical advice distributed in mid-eighteenth-century plantation management assumed that sufficient nourishment would prevent and heal illness.

In their discussions of provisioning, many mid- eighteenth-century authors selectively cherry picked from Drax's work. Modifying the original wording of Drax's medical advice, these slight alterations changed the meaning of Drax's counsel, from a stipulation that medicaments for sick slaves should be composed primarily from materials found in the kitchen, to mandates to augment the quantity of food given to slaves. Martin wrote that a "… proper diet and kitchen physic," were "…generally the most efficacious" in preserving the strength of enslaved laborers.[25] Martin did not delve into specifics. "In the case of sickness, the good planter will exercise in his person his utmost care and tenderness in the proper administration of proper physic and food, with an unsparing hand," Martin counseled in the body of his manual.[26] Similarly, Samuel Cary instructed the overseers of his estate in Grenada to make sure that "the doctors' orders are punctually observed," and commanded them to consult with the estate's surgeon when he visited. "..from experience I know," he added, "that good nourishment and care perform two thirds of the cure, particularly to negroes who at this time of year are many of them very low in flesh."[27] At mid-century, plantation management authors acknowledged the possibility of healing sick bodies, but shunted the knowledge and authority to do so to the plantation surgeons attending their estates.

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[24] Thompson, 583. In his discussion of slaves' illness, the absentee planter Philip Gibbes retained the spirit and letter of Drax's original instructions. "A more nourishing diet than the usual food afforded in time, is better physic than the apothecary's shop can supply," he advised. See Gibbes, 91.
[25] Martin, vii.
[26] Martin, 12.
[27] Cary, "additional care of the negroes," np.

Innovation in provisioning advice is seen in authors' efforts to provide readers with quantities of specific vegetables and animal products so that planters might rework the financial calculus of feeding slaves. In several texts, authors urged planters and overseers to provide adequate but moderate amounts of food in lieu of purchasing new slaves. Through the scrutiny of plantation expense reports and food debts in factors' bills and the cross-tabulation of this information with information on the average number of active slaves on a sugar estate, plantation management authors created new information on the quantity of food per laborer. This information appeared among other lists of capital outlays that were necessary to sustain a sugar estate. The cost of "300 quintles of salt fish," for example, appeared in William Belgrove's 1755 plantation management manual among other itemized expenses including "700 bushels of oats for the horses," and the cost of "500 pair of pot jars annually."[28] In attempting to quantify the amount of food necessary to sustain health, it was common for authors to list the specific amount of herring, beef, or salt necessary for purchase annually. Cary recommended "four herrings per week for each full grown negroe," in addition to an allowance of "one afternoon in every week to work their own ground."[29] In his manuscript guiding overseers of the Smithfield plantation in Jamaica, the absentee Richard Beckford detailed the type, quantity, location, and timing of when to plant different varieties of corn. "Plant every year 30 acres of Indian corn in ye Spring and Guinea Corn in September."[30] Disseminated in printed or manuscript plantation management texts, specific quantitative

[28] Caines, "Annual Expenses required to support this plantation," 42.
[29] Cary, "Instructions for Running a Sugar Plantation," np. Cary's manuscript manual failed to explain why herrings or corn best met the nutritional needs of a full grown slave laborer. Instead the intelligence he passed on related to the quantity of food and the amount of time necessary to profitably sustain the populations on his own estate, Mount Pleasant, and other plantations of a similar size.
[30] "Westmoreland, April 10, 1754. Mr. Richard Beckford's Instruction to Messrs. John Cope, Richard Lewing and Robert Mason," manuscript in Monson, 31.86 (Reel 15), np.

and financial advice guiding estate managers and planters on the annual cost and quarterly quantity of food, its mode of purchase and production, and its distribution constituted a new type of consumer-driven knowledge that was specific to plantations because it presumed planters desired information on quantity: how would they have to allocate in order to sustain a plantation's worth of enslaved dependents.[31]

By the end of the period, absentees and overseers had acquired a substantial amount of medical intelligence from their own experience about the health related properties of various provisions. The nutritional value of Indian cornmeal imported from North America was, for example, a subject of great debate. The plantation advice author Philip Gibbes invoked the fact that "the Italian nobleman eats it [corn] in polenta, the American gentleman in pudding, and the humble slave in Cucoe," as evidence of its universal nutritional value. What European nobleman Count Rumsford had written of the corn as a foodstuff of European peasantry was Gibbes counseled, "applicable to the maintenance of slaves, that one might suppose he was writing rather for the black inhabitants of the sugar colonies than for the poor of Bavaria or of England."[32] Yet Abraham Markoe, attorney for the Markoe family sugar estates in St. Croix dissuaded his father in London from purchasing "Indian Meal." "As for negro provisions, I must acknowledge I prefer ships stuff or Rye flour." "It is allowed by the doctors that negroes fed on Indian meal are more liable to complaints of the bowels and fluxes than those fed on any other kind of provisions." [33] Other authors acknowledged the nutritional value of

[31] For work detailing the care of servants and the boundaries between their status as kin and non-familial dependents see Naomi Tadmor, *Family and Friendship in Eighteenth-Century England: Household, Kinship and Patronage* (Cambridge: Cambridge University Press, 2001).
[32] Gibbes, 12.
[33] Abraham Markoe to Father, St. Croix, November 11, 1788 in Markoe Family Papers, Collection # 1935, Box 1, Folder 6, Historical Society of Pennsylvania.

proteins such as “horse beans,” long in use in the Windward Islands, but were skeptical about their suitability because the steps necessary to make them edible were extensive and rendered them unsuitable for large plantations given the time and labor constraints characteristic of feeding large numbers of slaves. Collins noted that it was “…troublesome for the proprietor to dress daily as many of them [beans] as would serve his whole gang.” Shunting the task to slaves also had bad consequences. Horse beans required “a great deal of time and cookery to prepare . . ., and your negroes having very little of either to spare, they are swallowed half boiled, or raw.” Improperly prepared, the beans “impart about as much nourishment to the body as so many bullets, or substances of a harder nature would do.”[34]

Throughout the eighteenth century, debate existed about the efficiency of importing foodstuffs. Was it better to set aside acres of arable land for slaves to grow and consume yams, plantains, and potatoes, or to import most food? The attention that overseers and authors gave in pondering the relationship between the nutritional value of different foodstuffs and their impact upon the productivity of slaves suggests they have a place within larger debates between planters, charted by scholars, about the economic profitability of allocating arable land for provision grounds and newer crops such as coffee and cotton. “The cost be somewhat large in his factor's bills," the aspiring agricultural author John Dovaston wrote in 1774 of planters who imported the majority of their foodstuffs. Dovaston advised planters to supplement vegetables grown on slave provision grounds with "a sufficient quantity of fish, English boars, peas, and flour from North America." He also noted that slaves “should be allowed a portion of salted beef

[34] Collins, 96.

(which are sent over from England or Ireland in barrels) or instead of this, salt or red herrings, cod or other fish." "This allowance they boil with their roots and vegetables and make for themselves a wholesome broth," he concluded.[35] "Scanty meals of New England corn may sustain life, but it is our produce only which can impart athletic vigor" the Antiguan Samuel Martin maintained.[36] "If the labor of producing our own provisions was fairly computed and compared to the expense of purchasing that of North America, I dare affirm the latter would be found as expensive, tho' much less wholesome and nutritious," Martin continued.[37] Martin's critique of the nutritional value of North American corn had a hidden agenda: he sought to end Caribbean planters' commercial reliance upon North Atlantic grain merchants; to expand the practice of slave provision grounds; and to develop local subsistence economies.[38] Corn that hardened and decayed while on board vessels from North America to the West Indies served as apt metaphor for the economic and physical decay that would ensue should planters continue to neglect local subsistence economies. In their lists of recommended foodstuffs and its geographic origins, authors wove economic and geopolitical strategy with medical necessity.[39]

One of the most striking elements of authors' discussions of provisions for slaves was the essentially conservative nature of their instructions. Martin eschewed the

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[35] Dovaston, 268.
[36] Martin, 12.
[37] Martin, 13.
[38] By providing slaves with time and land to cultivate plantains along with Guinea corn, yams, potatoes "we may by that means prevent the monopoly of corn and in some measure the constant drain of our current cash which the New England traders now carry to St. Eustacia for the purchase of French sugar, rum, molasses, and other foreign manufactures." Martin, 13, fn.
[39] It was only in medical texts discussing the ailments of hot climates where readers would find extensive discussions of the nutritional value of different foodstuffs. These texts also discussed in detail how imbalances or surfeits of vegetables vs. animal meats contributed to the onset of specific ailments. See for example, R. Shannon's discussion of animal foodstuffs in slaves' diets in *Practical Observations on the Effects of Certain Medicines in the Prevention and Cure of Diseases to Which Europeans are Subject in Hot Climates* (London, 1794), 1-2.

introduction of vegetables and carbohydrates grown in other tropical colonies of the British Empire. Instead he encouraged the cultivation of local and well-known comestibles. Sir Joseph Bank's project to transplant breadfruit from islands in the South Pacific to state-sponsored botanical gardens in St. Vincent and Jamaica received little support from planters and managerial staff, though it did elicit enthusiasm from colonial botanists. Few planters had the capacity or willingness to experiment with different food crops because failure would mean loss of profits and increased slave mortality, or both. The British state's failed project to popularize breadfruit, illustrates British West Indian planters' unwillingness to alter extant Atlantic subsistence economies. [40]

By the end of the century, food commanded greater moral attention in printed plantation management texts and in epistolary correspondence between plantation managers and owners as these writers responded to political pressures from London to improve conditions enough to ensure the supply of plantation labor through natural increase. Abolitionists' exposure of starvation on West Indian estates gave the feeding of slaves medical as well as moral significance. In texts published around the time of the American Revolution, authors wove economic justifications with moral and ethical arguments on the necessity of caring for dependents. "With those, to whom are entrusted the direction and government of any part of the human race, the first of all cares should be that of food," proclaimed Clement Caines.[41] Reiterating a tenet of plantation slave management that had been propounded since the inception of the agricultural

[40] Richard Sheridan, "Captain Bligh, the Breadfruit, and the Botanic Gardens of Jamaica," *Journal of Caribbean History* 23, no. 1 (January 1989), 30; Douglas Oliver, *Return to Tahiti: Bligh's Second Breadfruit Voyage* (Melbourne: Melbourne University Press 1988), 241-242, 245; *Elizabeth M. DeLoughrey, "Globalizing the Routes of Breadfruit and Other Bounties," Journal of Colonialism and Colonial History, 8, no. 3 (Winter 2007).*
[41] Caines, 135.

improvement movement at mid-century, Caines freighted foodstuffs with moral lessons that illustrated the ideal relations between superiors and dependents. To prove the efficacy of this combination of locally grown and foreign imports, Dovaston argued that the planter who implemented his methods would thereafter gain "strength and abundance" of labors from his joyous negroes," who would proceed to "reap double the cost," and more than repay the initial capital investment in arable land for slave grounds and outlays for imported provisions.[42] The information on the quantities of foodstuffs garnered through first-hand experience and replicated among successful estates made the transition from a labor pool sustained by the commerce in slaves brought to the region on slaving vessels to one nourished and sustained by North Atlantic trade in foodstuffs and local cultivation appear possible if not profitable.

II. *Distinguishing between Constitutions: occupation and seasoning*

Plantation and military advice authors drew a major distinction between those who had very recently arrived and those whose had lived in the region for some time. More than any other part of the Anglophone world, the Caribbean was a human catastrophe for newcomers. After 1740, both the slave trade and Anglo-French warfare in the region displaced Africans and soldiers from their native environments and turned them out to their deathbeds in Greater Caribbean ports in the tens of thousands.[43] The amount of time in the Caribbean created, all early modern people believed, constitutional distinctions between those who had recently arrived and those who had lived in the Caribbean long enough to become inured to the injuries of the region's environment,

[42] Dovaston, 268.
[43] Of the 1,008 men who arrived with the 78th regiment in Kingston in 1779, for example, only 18 were still alive in 1783. John Hunter, *Observations on the Diseases of the Army in Jamaica* (London, 1788).

particularly the Caribbean's "vertical rays," and the "heat of the sun."[44] The major distinction between these two groups was one of "seasoning," a noun describing the physiological and cultural hazing that migrants went through as they adjusted to the demands and social structures of work and life in the Caribbean.

Advice writers assumed that the working demands of the plantation or the extended land campaign gradually created distinctive constitutions among the lowest class of people who toiled in them. The unspoken premise of plantation management texts was that their recommendations addressed the health of field hands. This assumption was occasionally made visible when formal medical writers analyzing illness rather than discussing health differentiated slaves who worked as domestics and those who worked in the field. The groups most indifferent to yellow fever in Jamaica, the surgeon William Wright wrote, are "all people of colour, and negroes, are in a manner totally exempted from this disease, except as are employed as house servants, and fare the same as white people."[45] As a group, the excessive labor, poor diet, and exposure to cold winds and rain that sugar "gangs" endured positioned them on the deep end of a sliding scale of health. These groups were in reality and in the thinking of planters more susceptible to ailments of the environment and dietary imbalances than other higher-ranking domestics and skilled artisans. With proper nourishment and clothing, advice texts implied, the managerial staff could sustain the health of the individual slaves who populated a gang. The advice writer David Collins, for example, compared domestic

[44] George Davidson, "Article III: Observations on the Yellow Fever, and its Proximate Cause. In a letter from Dr. George Davidson, dated Port-Royal, Martinique, Sept 20, 1796 to James Mease, M.D. Resident Physician of the Port of Philadelphia," *The Medical Repository of Original Essays and Intelligence, Relative to Physic, Surgery, Chemistry* (Nov 1, 1797): 165-171, quote p. 168.
[45] William Wright, "Practical Observations on the Treatment of Acute Diseases; Particularly those in the West Indies," *Medical Facts and Observations*, 7 (1797): 1-25, quote p. 8.

slaves to "field negroes." "Domestic negroes," Collins explained, "undergo no more drudgery than the household duties require, and are supplied with competent food and clothing." Because of this, he reasoned, domestic slaves "are as healthy and prolific, and live as long as any other class of people in the West Indies." The slaves who fell under the category of "field negroes," in contrast, were constantly decreasing, a pattern that Collins attributed to "..the vice of regimen, and the operation of causes," which planters could combat with sufficient food and clothing.[46] Substantial material differences separated the lives of field hands, domestics, drivers, and boilers. Advice-authors correspondingly sometimes differentiated between the ranks of slaves or other types of dependents and was invoked as a sorting mechanism and as a shorthand for different types of constitutions.

Plantation management authors made an exception for the groups of skilled slaves whose occupational tasks exposed them to environmental hazards—particularly excessive lifting and cutting during the day or exposure to damp, nighttime air emanating from the humid parts of an estate. When the absentee planter James Chisholm learned from James Cragg, the manager of his estate in Jamaica, that "Chamba Tom's constitution won't do for a cooper," Chisholm responded by authorizing Cragg to "put him in the hothouse as he used to be a very steady fellow and I dare say will make a good doctor."[47] Watchmen, who "are placed over the cane pieces being supposed to be on alert in all weathers and much exposed to the night air," were also singled out in advice texts for the effects that the dangers that their occupational obligations posed to their health. They should be,

[46] Collins, 19.
[47] James Chisholm to James Cragg, Bath, England July 2, 1793 in Letterbook of James Chisholm, MS. 5476, Chisholm MS.

Collins wrote, "fortified with great coats," because continual exposure to humidity put their health in jeopardy. Sugar boilers, of a much higher rank than watchmen, "should also have a good flannel waistcoat, to put on when they quit their work [often from midnight to four in the morning] and go to the negro-houses, as they are that time very subject to take cold." Much of the prescriptions for giving additional food and textiles to specific occupational groups contained addendums that overseers should remind the high-ranking slaves who received these items that the coats indicated rank as well as. The coats given to the watchmen "may be taken from them, and transferred to their successors, as they are rather attached to the office than the person," Collins explained.[48] Most overseers and attorneys tailored textile and food allowances to create and reinforce rank within the hierarchy of an estate's slaves and to materially offset the danger that accompanied particular types of skilled work.[49]

Expectations about how a person should be seasoned depended upon the occupation of the individual or group in question. Elites undergoing a seasoning had the attendant prerogatives of rank assisting their passage: they could control what they ate; when and how much they rested, and, with certain exceptions, where they resided. "From a superiority of rank and circumstance," the military advice-author John Rollo wrote, "officers can regulate their own diet, they can often make a bad situation comfortable, and they can avoid many exposures which it is impossible for a solider to shun or guard against."[50] Most important, elites had control over the extent of their physical exposure to

[48] Collins, 131.
[49] Justin Roberts, "The 'Better sort' and The 'Poorer Sort': Wealth Inequalities, Family Formation and the Economy of Energy on British Caribbean Sugar Plantations, 1750-1800," *Slavery and Abolition*, 35 (2014): 458-73.
[50] John Rollo, *Observations on the Means of Preserving and Restoring Health in the West Indies* (London, 1783), 5.

and exertion in the West Indian climate. "An umbrella is one of the first things," that officers could use to protect their unseasoned bodies from the violence of the Caribbean sun. "The most proper umbrellas are those made of green silk and of a large size," Rollo explained.[51] By "living in the house with lofty and spacious rooms, never travelling on a full stomach in a dry situation, keeping indoors with as much as possible during the middle of the day, …and pursuing vacant hours from business," newcomers the could avoid the maladies that often beset those unseasoned to the Caribbean climate. "Riding on horseback and walking are the only exercises which should be taken by new comers, and these should be used in the cool of the mornings and evenings," the surgeon Robert Thomas explained.

The same criteria governing how elites, the sedentary, and those not obliged to perform physical labor passed through the seasoning process informed how much physical expenditure they could withstand once seasoned. A seasoned person who engaged in too much physical activity in the Caribbean would soon fall sick, because copious amounts of physical exertion placed demands on the person's constitution for which it had not been prepared. "Bookkeepers" on plantations, often young British men who had recently arrived in the islands, for example, frequently became sick and attributed their sudden illnesses to the physical dimensions of their employment for which they were not habituated. When a number of slaves on a plantation fell ill with the epidemic "catarrh," a medical author wrote, "a young man, one of the book-keepers," experienced heavy fatigue because he was "in constant attendance on the sick," and he was "suddenly seized with severe pains across the breast, accompanied with such a

[51] Ibid., 9.

weight and spasmodic sense of spasmodic stricture, as almost deprived him of breathing."[52] In Britain, the occupation of "bookkeeping," did not entail copious amounts of walking, inspecting, and caregiving. Yet the same category of employment in the Caribbean required much more physical labor than many could sustain. "Why he is called book-keeper it is no easy thing to say," one observer of plantation hierarchy in Jamaica wrote. Perhaps, he speculated, it was "because the name serves to mislead young men, who, being used to cities and counting-houses, go out in search of commercial employment." Yet once in the West Indies, these young men "find themselves, to their surprise, and contrary to their taste and *habits*, involved in agricultural pursuits."[53] The discrepancy often resulted in illness.

Approximately a year after the aspiring physician William Gordon arrived in Jamaica from Edinburgh and began working as a bookkeeper on Archibald Sinclair's sugar estate, he became "extremely bad of a cough." His brother Lewis theorized that William's cough was caused by the fact that William had underestimated the levels of exposure to the torrid sun entailed in bookkeeping. "His health is at present greatly impaired," Lewis wrote. "I really believe," the concerned sibling elaborated to their father, "in great measuring owing to his fatiguing himself too much in attending the business of the plantation." "Some parts of the duty of a bookkeeper on a plantation are too severe," Lewis elaborated, "for a man of his puny constitution."[54] Although seasoned, William's body, like many of those unaccustomed to physical tasks and ongoing

[52] John Lindsay, "An Account of the Epidemic Catarrh of the later end of the year 1789, as it appeared in Jamaica," *Medical Commentaries for the Year 1792*, decade second, 7 (1793): 499-527, quote p. 523.
[53] Gilbert Mathison, *Notices Respecting Jamaica* (London, 1811), 46, my italics.
[54] Lewis Gordon to Robert Gordon, Kingston, Jamaica, June 9, 1760 in "Gordon Family Letters," Laing II 498, University of Edinburgh Special Collections Library, Edinburgh, Scotland.

exposure to heat during the day, was not prepared to engage in physical toil in the West Indian environment. What the process of seasoning achieved was understood to be calibrated to the physiology of the person in question, which had been formed by his or her occupation.

The goal of seasoning soldiers and slaves was to ensure that they would remain healthy while performing heavy toil in the Caribbean climate.[55] The surgeon William Bremmer's arguments for the necessity of using British regiments to perform slave patrols evidences the belief among laypeople that infantrymen's seasoning had formed them for heavy work. Bremmer argued that regular soldiers alone could endure the arduous demands of tracking and fighting enslaved combatants. They were certainly better equipped than plantation managerial staff who were not, Bremmer wrote, "the sort of force likely to be able long to cope with such enemies." "The habits and modes of life," of overseers and bookkeepers "not being such as to render it probable they could endure the excessive fatigue, numerous privations, and constant exposure to the weather necessarily attending a service of this nature."[56] The military surgeon John Rollo's description of the demands of infantrymen in the West Indies spotlighted the heavy work they could be expected to perform. "A soldier is liable to be removed from place to place, to be exposed to the inclemencies of weather, and to be employed in every species of hard labor," Rollo explained.[57] "New troops," the military physician Benjamin Moseley advised, "…should not be harassed with maneuvering and the manual exercise."

[55] On seasoning see Karen Kupperman, "Fear of Hot Climates in the Anglo-American Colonial Experience, *William and Mary Quarterly*, 41 (1984): 213-40.
[56] Microfilm of typescript of the William Bremmer Memoirs, 150, Acc. 9562, National Library of Scotland, Edinburgh, Scotland.
[57] Rollo, *Observations on the Means of Preserving and Restoring Health in the West Indies,* 3.

Asking them to perform these movements too soon would "exceed the proportion of exercise which is conducive to health." "All drudgery and hard labor should be performed by negroes and others inured to the climate."[58]

Lumping "negroes," with "others inured to the climate," Moseley's injunction has been taken up by several generations of scholars who locate the origins of racial thinking in British military officials' claims that Africans removed to the Caribbean did not suffer from rapid changes of the air and the environment because, eighteenth-century Europeans maintained, of the similarities of the West Indian climate with that of Africa. This belief, scholars have shown, sustained political arguments for the use of African labor from a range of historical actors—from Royal Governors arguing for the necessity of raising black regiments in the British Army to planters contending for the improbability of replacing African-slave labor regimes with those populated by either free Africans or Europeans. Less visible and less discussed are the variations in thinking about the effects of change of environment upon recently arrived Africans to the Caribbean.

Many eighteenth-century medical and agricultural advice authors maintained that African slaves also suffered from the rapid dislocation from the airs, waters, and vegetation of their native environment. "The climate being so similar between those parts of Africa from whence the negroes are brought, and the West-India islands, might naturally suggest an idea, that no bad consequences would result from their transition from one to the other," the agricultural advice author David Collins wrote echoing contemporary scholarship.[59] "However, that is not the case," Collins continued, " for bad effects do ensue." Collins attributed the frequency of illness among new coming slaves to

[58] Moseley, 192
[59] Collins, 570.

small differences in the temperature of Africa and the Caribbean. "In the sugar colonies, where the trade wind, sweeping over the Atlantic, comes cooled to the islands, and abates considerably of the power of the sun's rays," created a difference of "heat between," Africa and the West Indies that was "very great." On the grounds that the principal shock to unseasoned Africans was the colder temperatures of the Caribbean environment, the plantation advice author James Grainger inveighed against placing unseasoned slaves on mountain estates, locales presumed to have healthier airs than their lowland counterparts. "New negroes should never be sent to mountain plantations; for they are very liable to catch cold, or to fall into fluxes, which always prove troublesome to remove."[60] The slavery propagandist Edward Long also attributed negative population growth in Jamaica to uninformed planters who moved new Africans immediately from slave auctions to mountain estates, without accounting for the time necessary to assimilate their bodies to an atmosphere colder and wetter than the one of their native birth and that of the slave ship. "New negroes sent into the mountains immediately after their importation, especially during a wet season, are almost sure of being afflicted with severe colds, pleurises, fluxes, and other distempers, which prove their bane," he explained. "Even the creoles," he continued, "do not bear these removals from places where, perhaps, they have resided from the time of their birth."[61] The distinction between seasoned or creoles slaves and recently imported Africans constituted a major analytical line of demarcation in plantation management texts and epistolary correspondence. Much of this writing discussed climatological differences as a major concern for those supervising new African migrants. The attention writers gave to the seasoning of new African slaves

[60] James Grainger, 12.
[61] Edward Long, *The History of Jamaica,* 2 (1774), 435.

suggests that illness attributed to rapid relocation to a different climate applied also to different African ethnic groups forcibly transported to the West Indies and other parts of the New World.

Planters and plantation advice authors held expectations about what the process of seasoning slaves would accomplish that paralleled what military officers claimed. Body management advice aimed at seasoning slaves contained practices that transformed their constitutions into ones that could withstand heavy labor in the tropical climate. "In inuring new negroes to the labour of a sugar plantation, they should at first be only employed in doing work which is light and easy."[62] During the first two or three years after their arrival," African migrants, the historian Edward Long wrote, "are always much indulged…being put to the gentlest work that they may be gradually seasoned to the change of climate and trained by a slow and easy progress to undergo the same degree of labor as the rest."[63] "The primary object and greatest difficulty in their seasoning," Collins wrote of seasoning slaves, was of "inuring of them gradually to labor, so that they may undergo it in continuation."[64] The attorney Simon Taylor advised the absentee planter that "new negroes are put on an estate or penn, to work them as gently as possible for 12 or 18 months."[65] Advice authors stressed the importance of discovering the places that had temperatures and climates commensurate with which newly-arrived slaves were accustomed, as part of preparing new Africans newcomers' constitutions for heavy toil. "At first let them pass their time in pleasure and gaity, till their strength is returned…and their body brought to a proper temperature and habituated to the clime," the advice author

[62] Robert Thomas, *Medical Advice to the Inhabitants of Warm Climates* (1790), 9.
[63] Edward Long, *The History of Jamaica,* 2 (1774), 432.
[64] Collins, 60.
[65] Simon Taylor to Chaloner Arcedencke, Kingston, July 5, 1789.

Dovaston wrote.[66] In contrast to elites, the seasoning process for rank and file soldiers and all enslaved people aimed to acclimatize their bodies for work in the torrid zone.

A successful seasoning required personal discipline—to abstain from alcohol, to eat in moderation, to moderate physical activity, and to limit exposure to noxious airs—a quality that dependents were widely understood to lack. "By *good management,"* a chronicler of health in Georgia wrote, "the gradual object of seasoning will be attained without risk, and the danger of subsequent attacks diminished in a direct ration with the duration of residence."[67] Advice guiding planters and officers shepherding dependents through the seasoning process stressed the necessity of modeling self-discipline. A respectable planter should "…exhibit a life of sobriety, chastity, and beneficence, as a patter to be imitated by all his family."[68] The military surgeon John Rollo, who elsewhere weighed in as expert on the micro-climates of St. Lucia and their pernicious effect on the health of British invading troops, addressed his 1783 *Observations on the Means of Preserving and Restoring Health in the West-Indies* to officers who had responsibility for "the direction of others." "A commanding officer," Rollo wrote, "has it always in his power to act the father and the friend to the virtuous subalterns."[69] Rollo used the rhetoric of paternal care to imbue officer's rank with familial responsibilities. Officers and planters justified the imposition of draconian regulations upon dependents new to the region on the grounds that it sustained their health. "The condition of the soldiers should place him in the eyes of his officer, as a child, and, like a child, he is sometimes

[66] Dovaston, 251.
[67] Joshua E. White, "Cursory observations on the Soil, Climate, and Diseases of the State of Georgia," *The Medical Repository of Original Essays and Intelligence,* 4 (August-October: 1806): 127-28 fn.
[68] Patrick Kein, *An Essay Upon Pen-Keeping and Plantership* (Kingston, Jamaica, 1796).
[69] Rollo, *Advice to Officers,* 4-5

troublesome and refractory, and must be served against his will," Moseley explained. [70] "The unhealthiness of this climate in many particulars is obvious," Colonel Gillespie wrote of Jamaica. "It is however not so bad as is generally observed, which by a little care and well-judged discipline on the part of officers, may, in great measure, be combated against." [71] The assumptions about officers' and planters' capacity for rationality and disinterest that gave them legal power over their dependents similarly sustained arguments granting superiors the moral and medical authority to conduct dependents' transition through the seasoning process.

The officious and paternalistic ethos that encouraged officers to intervene in the everyday lives of infantrymen sometimes became policy. Concerned about the detrimental effects that infantrymen's intemperance had upon their health and, by implication, the defense of Jamaica during the Seven Years' War, the Jamaican governor Roger Elletson tried to stop the disbursement of direct payments owed to the infantrymen in two regiments stationed in the island. "The mode adopted by the House in the Additional Duty Bill for the payment of His Majesty's troops appeared to me a very improper one," the governor wrote in 1766. Elletson objected to the article in the Assembly's bill that the "money shou'd be paid into the hands of the soldiers themselves, and not to the officers for their use, as has been customary." This way of disbursing the money was intolerable to Elletson because it made large sums of specie available to infantrymen, who, in turn, used their pay to drink themselves to excess. In placing payments directly in the hands of infantrymen, the Assembly had created a policy that

[70] Moseley, (1795) 193
[71] Lieutenant-Colonel Gillespie, *A General Outline of the Standing Orders and Regulations to be Observed by the XX Light Dragoons, Whilst in Jamaica* (St. Jago de la Vega, 1800), 5.

was "…very destructive not only of the health of the men but of all good order and discipline," Elletson wrote.[72] Elletson tried to block the bill but was forced to assent due to "…the extreme necessity of the troops and their great want of money." As governor of Jamaica, Elletson sat far above the officers and lieutenants responsible for the health of infantrymen. And yet he attempted to implement paternalistic policies that would buoy their health through the control of their spending money.

The dangers of the Caribbean environment for soldiers and slaves recently disembarked could be mitigated by controlling dependents' movements—particularly by minimizing their exposure to temperature changes and making sure they did not become damp or wet at times of the day that would hinder rather than boost their health. The literature addressing officers and commanders paid greater attention than plantation management texts to the specific times of the year and daylight hours when superiors needed to keep a watchful eye on the undisciplined rank and file. August and September, the "Canicule, or dog-days… a season which is hazardous to the health of Europeans newly arrived," was a period "when the seamen should be guarded against as much as possible from intemperance and the shore," the naval surgeon Leonard Gillespie wrote, on the grounds that sailors were likely to expose themselves to noxious shore-airs when they fell asleep outside in drunken stupors.[73] Rollo endorsed bathing in cold water as a morale booster for officers and infantrymen, but stressed the importance of properly timing this activity. "Soldiers," he cautioned, "ought not to have discretionary power to bathe, because they are liable to abuse it, either by chusing an improper time, or being in

[72] Roger Hope Elletson, Jamaica September 29 1766 to Lords Council of Jamaica, reprinted in "The Letterbooks of Roger Hope Elletson," *Jamaica Historical Review,* 29 (1946), p. 333.
[73] Leonard Gillespie, *Advice to the commanders and officers of His Majesty's fleet serving in the West Indies, on the preservation of the health of seamen* (London: J. Cuthell, 1798), 13.

a state in which it may prove hurtful."[74] Rollo elaborated: "If regiments or detachments were paraded at a selected hour, and marched off to bathe under the direction of officers….then the good effects of bathing, without its inconveniences might be expected." Rollo used a detachment of the Artillery, comprised of twenty men, that had been stationed in Barbados, who "went into the sea two hours before the morning parade, which made the hour of bathing to be about six o'clock," as an example of the ideal times for soldiers to take cold baths.[75] Such prescriptions guided officers and commanders in managing bodies out of place.

Plantation management authors also prescribed bathing as a way to protect against the dangers of the climate. "If your plantation lye by the sea, cause your new negroes to wash themselves each day for a considerable time," the planter-author Dovaston wrote. [76] "The cold bath, particularly the sea if near at hand, is of great benefit to new negroes, by cleansing the skin, and bracing the body and rendering it less susceptible of colds," Collins advised. Advice authors also provided specific instructions on when slaves should bathe. "The negroe who attends them," Collins elaborated, "and whom I shall call their guardian, should see that they make use of it every morning, unless any of them have complaints that forbid it."[77] When Dovaston and Collins recommended morning as a better time for slaves to bathe than evening they were also adhering to ideas about health that proscribed any activity that created a rapid change in a person's body temperature. Bathing in the evening ran the risk of illness, because the cool temperature of the water would clash with the elevated body temperatures of slaves, whom had been physically

[74] Rollo, *Observations on the Means of Preserving and Restoring Health in the West-Indies,* 62.
[75] Ibid., 69.
[76] Dovaston, 252.
[77] Collins, 67-8.

exerting themselves in the field. One medical writer, for example, cited the "…custom very common among negroes, of throwing themselves into the first water they meet with when they are heated by exercise, &c.," to explain the variations he observed of the prevalence of the epidemic catarrh on different estates in geographic vicinity to one another. On plantations that were "in the neighborhood of large ponds," the catarrh "was severe and affected great numbers," because the slaves bathed at the wrong time.[78] Dovaston's and Collins' recommendations that slaves bathe in the morning was in line with prevailing medical theory that proscribed any activity or object that would produce a rapid fluctuation in a person's temperature.

Seasoning regimens intended for slaves recently disembarked from transAtlantic slaving vessels focused on diet and rations as a matter of minimizing the physiological stress accompanying their transition from ocean to land as well as from Africa to the West Indies. The attorney and plantation owner Simon Taylor attributed skin lesions prevalent among slaves who had resided on an estate for a short amount of time and who had only recently arrived to Jamaica from Africa to the extreme differences in the foodstuffs fed to slaves on board slaving vessels and that given to them estates. "Most new negroes," he explained "are exceeding apt on their coming on estates to break out in most inveterate ulcers from the change of diet, being fed on board the ships with peas, rice, yams etc." "I consider the sores to be greatly owing to the herrings we give them."[79] After purchasing "three Coromantee Wenches and one of the Chambra Country," from a slave sale in Montego Bay for the pimento planter Alexander Johnston of St. Ann's

[78] John Lindsay, "An Account of the Epidemic Catarrh of the later end of the year 1789, as it appeared in Jamaica," *Medical Commentaries for the Year 1792*, decade second, 7 (1793): 499-527, quote p. 525.
[79] Simon Taylor to Chaloner Arcedencke, Kingston, July 5, 1789 in Vanneck Papers, Department of Manuscripts and Archives, Cambridge University Library (hereafter Vanneck MS).

Parish, the slave factor Thomas Taylor reported to Johnston how he had prepared them for the march from Montego Bay to Johnston's estate. "Have taken care to see they should be *particularly* fed—with plantains first and to the expense of 3/9 in this house," Taylor reported. Taylor's actions reflected the idea that newly disembarked slaves should be fed a vegetable-based diet because a sudden alteration in the content's of one's diet would produce illness. By feeding the newly arrived plantains, Taylor created a diet that maintained consistency with the one the newcomers had experienced while on board the slaving vessel. [80] "Their food," plantation management author James Grainger wrote of recently arrived slaves at mid-century, "should be as little different from what they eat at home as may be; and this must be learnt from their country folks." One of the causes of illness, authors explained, stemmed from plantation managerial staff's failure to differentiate both the content and proportion of provisions given to recently arrived African slaves from those fed to creoles: "New negroes are fed in many of the islands with corn or rice, or ill-dressed flour, of which many of them never tasted in their lives in their own country, and in that case their bellies relaxed and they are thrown into fluxes and dropsies," Collins wrote. "It is little considered what they are accustomed to eat before they come among us," Collins explained before inveighing against the assumptions that whites made about the similarities in the dietetics of enslaved Africans and white colonists. "Our habits being so different, and our diet more substantial and nutritive than that which they received." Collins maintained that it was important to allow new slaves to eat portions larger than what European ideas of regimen would hold to be

[80] Thomas Taylor to Alexander Johnston, November 4, 1774, Montego Bay in Alexander Johnston Daybook, Alexander Johnston Papers, Historical Society of Pennsylvania, Philadelphia, PA. My italics.

healthy.[81]Authors stressed that slaves should receive specific types of vegetables to ease the jarring transition between the diet of the middle passage and that of plantation agriculture.

The designation of "new bought negroes" indicated a group of people who had yet to assimilate the hierarchies, values, and work routines of plantation agriculture. In their letters and advice-texts, writers stressed that part of the process of seasoning new Africans entailed managing their emotions, or in Galenic terms, "passions." [82] "New negroes are to be treated with a very gentle hand…for if despair once takes possession of their minds all medicine and future care will be of no purpose," Richard Beckford wrote in an instruction manual he gave to the estate's overseers. [83] In this case the "passions" stood in for newcomers' sense of alienation and despair and indicated an area of concern to which planters and other managerial staff should attend. Planters often relied on more experienced slaves, often from the same part of Africa, to mitigate new Africans' despondency. "The new comer is placed with one of the old negroes, and by whom he is instructed in his business," the naval commander Cooper Williams observed, narrating what he witnessed during a slave sale. [84] Benjamin Vaughan summed up the treatment of unseasoned slaves in a series of commands: "With new negroes be very tender put them to gentle work and soft soil; look to their food; keep them in health and spirits by talking to them; and see that the other negroes don't abuse them."[85] Taylor recommended "to

[81] Collins, 57.
[82] "new bought negroes," in Dovaston, vol. 2, 251.
[83] "Westmoreland, April 10, 1754. Mr. Richard Beckford's Instruction to Messrs. John Cope, Richard Lewing and Robert Mason," manuscript in Monson, 31.86 (Reel 15), 3-5.
[84] Cooper Williams, *An Account of the Campaign in the West Indies in the Year 1794, Under the Command of their Excellencies Lieutenant General Sir Charles Grey, K.B. and Vice Admiral Sir John Jervis, K.B. commanders in chief in the West Indies* (London: Printed by T. Bensley, 1796), 14-15.
[85] Benjamin Vaughan to Charles Vaughan, October 24, 1774, Series II, Box 1, Benjamin Vaughan MS.

have a careful person who speaks their country language to dress their victuals for them thrice a day."[86] Sometimes this introduction was made in town, immediately after the sale. Most often, however, this occurred when new Africans arrived on a plantation, where "the new negroes should forthwith be cloathed and put under the care of some sober elderly person, if possible from their own country," Grainger advised. "The old settled ones," i.e. the slaves who had passed a substantial amount of time in the West Indies and who could communicate in the language of a particular ethnic group were generally treated in advice literature as an extension of whites' supervisory authority: granted the capacity to feed and prepare newcomers' meals, Grainger positioned these personae as key figures in a new African's seasoning process.[87] This person "must be," Grainger continued, "answerable to their having food regularly given to them."[88] Not everyone agreed. "These hosts generally make their guests pay dear for their lodging and maintenance, forcing them to be their 'hewers of wood and drawers of water' and in short, imposing on their ignorance without measure or mercy, until they sink under the oppression," Long explained to Parliament as he defended the reasons for slave population decline in Jamaica. For Long, the enslaved acculturating agent was a figure of animus who took advantage of his position, starved the slave under his care, and advanced the island's horrific reputation among the British metropolitan public. The calls for older Africans on estates to house and feed new Africans and to prepare their victuals indicate that part of the process of seasoning new slaves entailed minimizing perceptions about the differences between their life prior to and after capture and transportation.

[86] Simon Taylor to Chaloner Arcedencke, Kingston, July 5, 1789, Vanneck MS.
[87] "The old settled ones," in Long, *History of Jamaica,* 2 (1774), 436.
[88] Grainger, *An Essay on the More Common Diseases of the West Indies* (1764), 8.

In stressing that rapid changes in diet, temperatures, and climates created ill health and placing great weight on strategies that would minimize these fluctuations, the concept of seasoning formed an important intellectual template bifurcating the management of laboring groups in the Caribbean environment into two discrete sub-categories of working people.

III. Miasmas and Microclimates: Managing The Atmospheric Air

The stress laid on the atmospheric environment as the source of processes that caused illness was evident in the strategies that officers and planters used to manage the health of soldiers and slaves under their watch. The schemes of body management implemented on plantations and articulated in military medical manuals reflected the contention that illness in the tropics among the seasoned was caused by abrupt changes in temperature. All agreed that the West Indian climate, especially its rapid fluctuations in temperature and humidity levels, was detrimental to health of seasoned residents as well as newcomers. "It is not simply sun alone…but transitions from one to the other [climates] which are so annoying to human nature and which occasion the diseases in general in these climates," the military physician Benjamin Moseley intoned.[89] "The falling of rains, especially when in great quantities, renders the air cooler, moist, and damp for many hours and sometimes days," the Barbadian physician William Hillary explained. Yet "clear and very hot dry days," often preceded the spells of rain Hillary described. "These great and often sudden changes of the air almost constantly produce dysenteries," he concluded.[90] Most of the plans to combat this element of the atmosphere

[89] Benjamin Moseley*, A Treatise on Tropical Diseases; on Military Operations, and on the Climate of the West Indies* (London, 1795), 63.
[90] William Hillary, *Observations on the Changes of the Air and the Concomitant Epidemical Diseases in the Island of Barbados* (London, 1759), 202-203.

centered on the amelioration of soldiers' and slaves' housing. "Next to hard labor and scant feeding, nothing contributes more to the disordering of negroes than bad lodgings," the plantation management advice author Collins proclaimed. [91] Another author suggested planters dedicate the arable ground in a sugar estate not used to produce canes to "provisions, pastures, wood for negroe houses (which ought to be kept in good order, as more negroes dye for want of proper houses than by other means)." [92] When authors discussed importance of minimizing hasty changes in temperature or exposure to damp airs, they were speaking primarily to rapid changes in temperature that occurred in the Caribbean during the course of a day or week. Late eighteenth-century medical advice authors pointed to housing as important element of self-care that could mitigate the effects of dampness within the air upon laboring populations

Laypeople and authors alike pointed out the deficiencies in current building stock in the Caribbean, pointing to barracks and slave quarters that had insufficiently sheltered slaves and soldiers from damp nighttime airs. Both groups' exposure to the nighttime dews was, observers claimed, a cause for great mortality in the islands. A problem with slave huts was that "every agitation of the air is felt in them." While it was important to maintain habitations that promoted the ready circulation of air, quarters for soldiers or slaves who had perspired during the day could only keep them healthy insofar as they minimized further dampness. "If a man retires to rest," the plantation management author Collins explained, "unfatigued by exercise, with no excess of perspiration, and with his body of its ordinary temperature, much inconvenience, perhaps, is *not* to be

[91] "He has no ear for caution; and the only way to protect him from the effects of his indiscretion, is not to allow him an opportunity of being indiscreet," Collins, 134.
[92] Belgrove, 31. After "wood for negroe houses," Belgrove's list included cattle pens, yards, and commons.

apprehend from the wind, though it should blow upon him." This was not the case with field slaves. "But if he has labored hard through the day, as negroes always do, and in consequence the pores being opened much injury may result…if his body be covered with wet clothing," particularly when field hands turned in for sleep. Collins fixated on innovations in slaves' housing as a means to combat increases in wetness. "As wind, therefore, is so hurtful an agent when acting under such circumstances, it surely becomes our duty to exclude it as much as possible from their dwellings."[93] A notorious example of the balefulness of damp airs in a confined space was seen in the high mortality that prevailed among British soldiers in the invasion of St. Lucia; in 1778 British regiments invaded and occupied the French stronghold but at great expense of manpower due to high illness-related mortality losses during the siege. Rollo did not need to summon various medical texts to explain "the prejudicial consequences which follow a leaky roof and a damp floor." "It will be quite enough to sound the fatal name 'St. Lucia!'" he dramatically wrote. The hard won victory encapsulated the dangers that accompanied campaigns where officers had been inattentive to the habitations and locations of soldiers' quarters and camps.[94]

An equally important ambition in constructing housing for slaves and soldiers as shelter from the wind and damp was the promotion of fresh air. The influence of late eighteenth-century ideas about health articulated by pneumatic chemists such as Stephen Hales, Joseph Black, and Joseph Priestely, who claimed the atmosphere contained many different types of gases, is evident in planters' and officers' attention to atmospheric

[93] Collins, 134.
[94] Rollo, *Observations on the Means of Preserving and Restoring Health in the West-Indies*, 57.

stasis.[95] The ratio of these gases within a given space, they maintained, could have pernicious or beneficial effects upon humans. Human confinement in small spaces, such as jails, gaols, theaters, ships, hospitals, and barracks, produced, these authors wrote, a proportion of unhealthy chemical gases that were causative agents of disease. Medical men and laypeople characterized the healthfulness of different types of air by describing the ease with which air circulated within a given space.

Counsel addressing the construction of slave quarters and soldiers' camps emphasized the use of materials that would encourage the free circulation of air while sheltering inhabitants from the wind and damp. "An attention to cleanliness and a free circulation of air should direct you in the construction of the house," the plantation author Philip Gibbes instructed.[96] "Instead of thatching the sides, as now practiced, to the injury of negroes' health….they should be wattled with small rods..and plastered within with clay, which being whitewashed, will render them more light and pleasant, and exclude the wind," Collins explained.[97] Collins' advice was most likely based on practices already in place, as it mirrored the building materials that Dovaston recommended in his manuscript instruction manual. The walls of slaves' huts should be "wound with wattles and plastered over with clay or mortar and the roofs thatched with palmetto."[98] Authors noted that damp did not come just from the air but from the ground as well. A British general organizing the arrangement of camps in South Carolina and Georgia during the

[95] On the emergence of pneumatic chemistry and associated public campaigns to purify the air of confined spaces see Jan Golinski, *British Weather and the Climate of the Enlightenment* (Chicago: University of Chicago Press, 2007), 138-169; Steven Johnson, *The Invention of Air: A Story of Science, Faith, Revolution, and the Birth of America* (New York: Riverhead Books,2008); James C. Riley, *The Eighteenth-Century Campaign to Avoid Disease* (Basingstoke: MacMillan, 1987).
[96] Gibbes, 2-3.
[97] Collins, 139.
[98] Dovaston Vol. 2, 64.

American Revolution reminded officers that "the dews in this climate are very prejudicial to the health of men." He proceeded to prohibit soldiers without tents from sleeping in the open air. "The General directs that bush huts be built by those troops who have not tents as soon as possible after they come upon ground….and that they avoid when in any situation lying on the wet or cold ground."[99]

Most plantation management authors believed that the easy circulation of air was best achieved through the construction of individual slave houses which would shelter a family group. Authors specified the distance between individual slave huts, intending to inhibit the formation of huts into dense villages that encouraged and perpetuated noxious human vapors. Collins argued for "an interval of thirty feet being the least that ought to be allowed between house and house," specifying that the houses arrangement in orderly and "equidistant lines" would "preserve a free circulation of air, and to admit a more direct communication between them."[100] On the other end of the spectrum were the recommendations of Philip Gibbes, who imagined one single shelter housing groups of slaves, in which the inhabitants would be grouped according to their sex. Gibbes' arrangement was cruel; it crammed slaves into confined spaces with little room for movement. It also did not incorporate newer ideas about the importance of circulating air as a building-block of health. "A building forty feet long and twelve feet wide would conveniently lodge twenty-four people, allowing two feet to each person," he explained. "In this house there should be two principle apartments: one for the males the other for the females."[101] Advice authors stressed the importance of eliminating stagnant airs

[99] Orderly book of Major General Benjamin Lincoln, Commanding the Southern Department, HM 659, 1778-79, Huntington Library, San Marino, CA.
[100] Collins, 139.
[101] Gibbes, 2-3.

while providing shelter from the wind and damp, experimenting with the arrangement of inhabitants in the process.

The specificity of plantation management authors' discussion of housing suggests they believed readers would dictate verbatim from the printed pages of their text to the carpenters on their estate. "The floors should be raised six or eight inches above the level of the ground and a small channel be kept open all round the outside of the house," Collins explained. These implements would "…convey away the water that drops from the roof or ozzes from the ground above." [102] Because "boarded floors absorb and retain wet," Gibbes recommended that the floors as well as the walls be covered in plaster and mortar "made of the finest and firmest materials." "This is a work that requires skill and attention in the person who executes it," he continued before giving specific dimensions of the floor boards. "The platform on which the negroes are to lodge should be six feet long and about two feet from the floor." [103] Plantation management authors directed readers on the types of building materials to purchase, their cuts, and arrangement. Practical consumer intelligence overlapped with informal medical advice about the importance of modifying the qualities of the air.

Some guides provided suggestions on the exact location of slaves' or soldiers' quarters to protect these groups from exposure to miasma (bad air) and to ensure that they benefited from the advantage of salubrious breezes nearby. For soldiers' barracks and officers' housing, writers counseled taking precautions to minimize the time the buildings would be exposed to the sun, on the grounds that the heat of the sun would increase perspiration among the building's inhabitants, which would, in turn, create noxious and

[102] Collins, 139.
[103] Gibbes, 2-3.

sickly airs. Benjamin Moseley was very specific about the relationship between the size and construction of a building and its location. Where barracks or quarters should be built "will depend on situation, in some measure, and the construction of the building." If a building had only a single, long, and narrow roof spanning North to South, then officers could expect that the "sun will bear all his force on its largest surface," on the eastern portion of the building, "from 6 to 8 in the morning and for the same reason, from 4 to 6 in the evening, rendering it excessively hot." For single buildings, Moseley advised an orientation that proceeded from East to West, on the grounds that "the sun will have less surface to act on, and the building must necessarily be cooler." Others focused on the noxious airs arising from the combination of heat and the natural environment. "When we are in the neighborhood of marshes, and to the Leeward of them, we should have that side of the house or hut which faces them shut up and closed as possible," Rollo explained. Entrances and windows on habitations near marshes should "be made in the opposite side." [104] Many planters constructed slave quarters in close proximity to cane pieces/fields, assuming that this would enable slaves to "guard their canes." But the combination of sitting water, morning dews, and, during the sugar harvest, rotting cane trash decaying in the sun produced noxious and fever-carrying effluvias and miasmas (bad air). This arrangement, according to Dovaston, "happens oft times fatal to them, by first taking hold of them and produce a horrid strain of deflagration to them." [105] On estates situated far from the ocean, "let the negroes huts to be built on the side of a sloping hill," Dovaston advised. "…breezes will fan them," Dovaston continued, "and

[104] Rollo, *Observations on the Means of Preserving and Restoring Health in the West-Indies,* 35-36.
[105] Dovaston, 261.

give their weary'd limbs fresh vigor." [106] The breath and perspiration from individuals sleeping and living together in a confined space produced noxious vapors that were as dangerous to human health as the miasmatic airs emanating from cane pieces or swamps, or really anywhere with standing water. Careful placement of soldiers' and slaves' quarters would minimize these effects.

There is some evidence that as ideas about the healthfulness of different types of air took hold in print, planters responded by reorganizing the location of different buildings on their estates. Samuel Vaughan, Benjamin Vaughan's father, had great ambitions to safeguard the health of Flamstead's slaves, and they manifested in a plan to improve the quality of the air within and around the estate's human habitations. In 1788 he drew up a plan to relocate the boiling house, slave quarters, and slave hospital to places on the estate far distant from the wet air that emanated from the estate's cane pieces and its natural water supply. Samuel began with the slave hospital. He directed Charles to level "the hill to the south of the hot house" (the slave hospital) so as to "throw the rain off and to give air." He then proceeded to rectify the insalubrious placement of the estate's dam next to the main dwelling house and slave quarters. Samuel believed the damp air emanating from the dam was to blame for the many airborne maladies to which the slaves were subject. Samuel quarantined the slaves from the damp air by forcibly removing the slaves from their former quarters. "No negro houses to be built on the north of the dwelling house," [near the dam] he specified. To replace now vacant slave quarters situated on the north of the dwelling house, Samuel instructed Charles to build new slave quarters on the south ward, because their former proximity to the dam on the north end,

[106] Dovaston, vol. 2 p. 64.

had rendered "the place unhealthy."[107] Samuel Vaughan's specific directives suggest the atmospheric environment remained, in the minds of planters, a key determinant of slaves' health.

An element of atmospheric concern that has not been appreciably noticed by scholars of amelioration concerned the movement of slaves acclimated to work in low-land sugar estates to high altitude coffee plantations and pens which, in Jamaica and the Windward Islands were frequently located in the mountains. Part of the silence on this component of body management stems, perhaps, from the fact that, with the exception of one book addressing penkeeping and a English translation of a French text on coffee-cultivation, all eighteenth-century plantation management texts written in English addressed sugar cultivation.[108] These texts formed a distinctive literature that described the labor requirements, start-up capital, managerial hierarchy, and topographic features best suited to sugar cultivation in the Caribbean. Coffee, a crop only introduced in the British Caribbean at mid-century, lacked both a literature and tacit knowledge describing how to best manage the populations forced to cultivate it. And yet the rise of coffee estates in the British West Indies in the late eighteenth-century resulted in the forcible transfer of large numbers of slaves between islands and estates. Most of these slaves who had formerly worked in low-altitude sugar estates were now relocated to the rain-heavy mountains of Jamaica and high-altitude forests of other Caribbean islands. Scholars have long studied the comparative ideas that European held about the seasoning of colonists and African migrants but for all the attention this subject has garnered, little attention has

[107] "Buildings to be Erected, Repairs, and Observations, Viz: Flamstead Estate," in M. 180.1 f. 2. Charles Vaughan MS.
[108] P.J. Laborie, *The Coffee Planter of Saint Domingo* (London, 1796).

been paid to the medical information planters' generated as they thought through the physiological effects of agricultural diversification.[109]

The challenges to slaves' health that would attend their removal from Flamstead, the sugar estate to the Crooked Spring Pen, located in the mountains worried members of the Vaughan family. The letter that Benjamin Vaughan wrote to his younger brother Charles and which opened this chapter, provides one example of planters thinking about the insalubrious effects that a change in temperature, moisture, and atmospheric pressure would produce on the slaves forcibly moved between microclimates within a single island. "How the negroes are to be relieved from their disorders in the mountains, I know not," Benjamin wrote. "But," he closed, "as these differ from the plains in having frequent rains, new land, sudden changes, and cold nights, the prerequisite precautions seemed to be a difference of housing, clothing, and turning out; in which experiment and good sense must direct you."[110] Planters like the Vaughan family might have a basic understanding of how to grow and harvest coffee berries and to cultivate guinea grass, but they lacked empirical experience about how best to acculturate enslaved people acclimated on sugar estates to this type of work. They could only theorize and hope that experiments would yield insight.

Planters and officers believed the surveillance of dependents' movements might curtail the dangers of miasmas, exposure to nighttime airs, and hasty relocation from a

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[109] Sean Morey Smith makes a tenuous connection between seasoning and race in "Seasoning and Abolition: Humoral Medicine in the Eighteenth-Century British Atlantic, *Slavery and Abolition,* 36 (2015), NP, online edition; for older examples of this interest in the relationship between climate and racial thinking see Kenneth F. Kiple and Virginia H. King *Another Dimension to the Black Diaspora: Diet, Disease, and Racism* (1981): 63-72; Donald J. D'Elia "Dr. Benjamin Rush and the Negro," *Journal of the History of Ideas*, 30 (1969): 413-22.

[110] Benjamin Vaughan to Charles Vaughan, October 24, 1774, Series II, Box 1 Benjamin Vaughan MS. Underlining in original.

familiar to an alien microclimate. Rollo listed "the management and behavior of soldiers," as the second most important element concerning their health, right after "comfortable and well-placed lodgings."[111] By this he meant preventing soldiers from lounging and loitering in their barracks, "as indolence is not only prejudicial in itself to health, but more so by begetting dirtiness and filth."[112] By strategically locating slaves' quarters, one might, advice texts suggested, observe and control slaves' movements. "Take care the houses be not too distant from the family dwelling," Collins wrote, "so that the proprietor or manager may at all times have an eye on the gang." The proximity of the slave quarters to the overseers' house allowed one to "be informed of their proceedings, to permit and to encourage innocent mirth, but to suppress turbulent contentions."[113] Marriage among slaves on the same estate formed another means to discourage nighttime exposure. "It is not only that you lose the offspring when your man slave take a wife off the estate..." Dovaston explained, "..but when work is subdued at night your man slave goes through the cold and moist damps to the plantation where his wife is, and carries with him food and support for her and his pickinninnies, and almost starves himself thereby." In addition to redirecting foodstuffs of the estate, this practice exposed the husband in question to the "danger of taking disorders from the dews and of travelling far instead of taking his rest." Nighttime visits also weakened the slave and rendered him less "fit for labor the next day."[114] Advice for both the military and plantations converged not only in their discussion on the dangers that the Caribbean

[111] Rollo, *Observations on the Means of Preserving and Restoring Health in the West-Indies*, 60.
[112] Ibid, 60.
[113] Collins, 137-8.
[114] Dovaston, vol. 2 p. 266

environment posed to soldiers' and slaves' constitutions but in their assumptions about the authority officers and planters wielded to control dependents' movements.

Ideas about surveillance and morality informed how the youngest brothers of the Vaughan family attempted to control the slaves on the Flamstead estate and the Crooked Spring Pen, particularly bondspeoples' exposure to moisture-infused nighttime air. "No negro be permitted off the property on pretense of fresh air and to be doctored," Samuel Vaughan Sr. wrote in a packet of instructions for the management of the Crooked Spring pen in 1788. "They cannot have a healthier place or better provisions than on the Penn," he rationalized. Besides this, the confinement of slaves to one estate "prevents idlers and bad habits."[115] In 1797 Samuel Vaughan's son, Samuel Vaughan Jr. wrote to his brother Charles to boast to him about the boons to the family's slaves that the engagement of a Baptist preacher on the Flamstead plantation had brought. "Through Baker [the Baptist preacher] I am introducing the customs and conveniences of a more civilized life," Samuel Jr. explained. "It is attended with the most substantial good effects by their superior health, regularity, and increase. In this year our increase was 4." The "civilized life," to which Samuel referred included marriage among the Flamstead's slaves. In Samuel's populationist framework, marriage not only encouraged new children, it augmented the health of the couple. Although Samuel Sr. did not specify what he meant by "bad habits," we might speculate that it included nighttime visits to slaves on distant estates and the exposure to the nighttime airs that worried Dovaston and others. Samuel Jr. also cited the increase in the estate's sugar output as testimony to preacher's good effect on the health of slaves: since settling the preacher on the estate "the average of the

[115] "Deficiencies for the estate, 1788," in M. 180.1, Box 1, f. 2 in Charles Vaughan MS.

crop" had risen "from 134 to 350 hogsheads of sugar." This was, Samuel wrote, "unequivocal proof of the superior industry" the preachers' civilizing practices had created. [116]

Conclusion

Samuel Jr. felt compelled to prove the preacher's positive effects on the slaves' health because his managerial decisions were scrutinized by other family members. But the younger Vaughan's efforts to measure and document the salubrious effects of the preacher's work also exemplifies planters' interest in experiments that would sustain and improve slaves' health. The Vaughans pursued the improvement of slaves' health most forcefully through attempts to change the composition of the airs that the slaves lived and worked in and used increases in the estate's slave population or its commercial output to gauge the success of their efforts. By focusing on materials that could preserve slaves' health, planters like the Vaughans believed they might bypass complicated considerations on the cause of illness, its means of transmission, and its specific mode of cure among slaves with diverse constitutions on the same estate. Specific directives relating to the location and materials of slaves' quarters and the composition of the air as well as injunctions to monitor and constrain enslaved peoples' nighttime movements suffused the Vaughan family's letters as well as printed and manuscript plantation management texts. These precepts paralleled the ones that appeared in didactic texts targeting military officers supervising dependent infantrymen.

The intelligence that the authors of plantation management texts provided on the types of textiles, building materials, foodstuffs, and atmospheric environments necessary

[116] Samuel Vaughan Jr. to Samuel V, June 20, 1797 in MS 180.1 Box 3, Charles Vaughan MS.

for sustaining slaves derived from other planters' experiences *and* the British Army's experiments with these elements of hygiene. Warnings about the necessity of attending to the atmospheric environment of slave quarters that appeared in printed and manuscript plantation management were very similar to directions for the placement of barracks and camps, which military and naval officers received in books and didactic pamphlets addressing the welfare of the British armed forces. Because soldiers, slaves, and sailors differed in their degrees of seasoning and climates of origin, the effects of the environment, poor diet, and insufficient clothing would manifest, authors and laypeople believed, differently in each group. The specific texts of each labor regime reflect the idea that hard labor in the Caribbean created specific types of physiological imbalance among groups of European, African, and Creole laborers who differed in their legal status, degree of seasoning, and climate of origin.

But the systems of health most workable to officers and planters and that found in epistolary correspondence, policies, and advice-texts shifted medical interventions away from frameworks that pictured illness as occurring in individuated soldiers and slaves with idiosyncratic constitutions. Instead the advice purveyed in these texts encouraged readers to consider the broader economic and environmental ecosystem in which these laboring groups carried out their obligations. The daily experience of supervising enslaved field hands countermanded the emphasis on the unique constitution of the individual articulated in early modern ideas of hygiene. The necessities involved in the supervision of agricultural commodity production encouraged plantation managerial staff to conceptualize field slaves as units rather than individuals: once in place, this vision made it even easier for overseers to devise a theory of illness that rendered environmental

conditions as the force generating distinctive physiologies and susceptibilities to ailments among different groups of slaves on the same estate, such as field hands and enslaved domestics. The preventative measures and prescriptions for good health that authors laid out in agricultural and military management texts thus reflect the instantiation of West-Indian hygiene, one that, over the course of fifty years, evolved into a system of body management that officers and managerial staff used to maintain the health of laboring populations in the Caribbean environment.

West Indian hygiene for laborers developed as a category of knowledge-making because the "non-naturals" that authors targeted were possible to manipulate in large numbers: diets, habitations, and the aerial environment were scalar categories of self-care, or, in the case of the military, navy, and plantation, supervision. Body management, in sum, provided these groups with a consumer-based system of medicine oriented to Atlantic mercantile economies. This Caribbean iteration of hygiene was built upon managers' conceptualization of their dependents as physiologically similar *en masse*; body management created the concept of a laboring population and enabled managerial staff throughout the West Indies to manage them.

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Chapter Three:
Epidemic Fevers in the Greater Caribbean and the Emergence of a Caribbean Medical Methodology

Introduction

In the last quarter of the eighteenth century fevers beset the garrisons, military camps, plantations, and ports throughout the Greater Caribbean. Medical men in the region debated the exact identity of the "fevers" they encountered, a generic term designating a broad group of non-chronic, infectious diseases and conditions that affected the whole body. As part of an imperial-wide effort to more specifically classify the different varieties of fevers in the tropical zones of the British Empire in relation to fevers well-known in Europe and North America, local physicians closely monitored and compared the onset and trajectory of West Indian fever epidemics to similar ones devastating other parts of the Atlantic World in this period. In the process these groups transformed the human-made landscapes of West Indian war and agriculture into practical laboratories for the study and classification of fevers and their modes of infection in the torrid zone. Fever epidemics in the Caribbean not only devastated local populations, they provoked conflicts and disagreements about their essential identity between resident military and naval practitioners, their peers in North America as well as their mentors and superiors in the British Isles.

Imperial medical men who had gone in significant numbers with the British military and the Royal Navy to tropical theaters of warfare on the coast of Africa as well as the East and West Indies constituted the largest groups of practitioners challenging traditional medical thought as taught in British universities and upheld by the Royal College of Physicians in London. The observations on fevers began during the War of Austrian Succession and appeared in a steady stream of publications and manuscripts that

were intended for British policy-makers and other medical men. This first set of warm-climate publications, which continued up through the Seven Years' War, was mainly concerned with the relationship between seasonality, atmospheric maladies, vegetable decay, human contagion, and febrile disease.[1] In the period between the War of

[1] Fever texts characteristic of the period prior to and immediately following the Seven Years War tended to be concerned with the relationship between seasonal changes in the air, temperature, and humidity and the onset of epidemic fevers. This group of authors include the following West Indian fever writers (listed in chronological order): Richard Towne, *A Treatise on the Diseases Most Frequent in the West-Indies and herein more particularly of those which occur in Barbadoes* (London, 1726); John Williamson, *A Treatise on the Diseases Most Frequent in the West-Indies, and herein more particularly those which occur in Barbadoes* (London, 1726); William Rawlin, *Case of William Rawlin, searcher of his Majesty's entries and customs at Bridge Town, Barbados and Henry Warren, doctor of physic, in the island* (London, 1738); John Tennent, *A reprieve from Death in two physical chapters* (London: Printed for John Clarke, 1741); Henry Warren, *A Treatise Concerning the Malignant Fever in Barbados and the neighboring islands; with an account of the seasons there, from the year 1734 to 1738* (London, Printed for Fletcher and Gyles 1741) John Baker, *An Inquiry into the Nature, Cause, and Cure of the Present Epidemick Fever* (London: T. Astley, 1742); Parker Bennet, *An Enquiry into the Late Essay on Bilious Fever* (1750); John Williams, *An Essay on the Bilious or Yellow Fever of Jamaica collected from the manuscript of a late surgeon. By Charles Blicke* (Kingston, Jamaica, 1750); George Cleghorn, *Observations on the epidemical diseases in Minorca. From the year 1744 to 1749* (London, 1751); John Lining, *History of Yellow Fever* (London, 1753); idem, "A Description of the American Yellow Fever," *Essays and Observations, Physical and Literary* 2 (1756); Sir John Pringle, *Observations on the diseases of the army, in camp and garrison* (London, 1753); Richard Gardiner, *An Account of the Expedition to the West Indies, Against Martinico, with the Reduction of Guadelupe, and the other Leeward Islands* (London, 1754); Gilbert Blane, *Candid Reflections on the Expedition to Martinico, with an Account of the Taking of Guadalupe by General Barrington* (London, 1759); William Hillary, *Observations on the Changes of the Air and the Concomitant Epidemical Diseases in the Island of Barbados* (London, 1759); Salomon de Monchy, *An Essay on the causes and cure of the usual diseases in voyages to the West Indies* (London, 1762); Antoine Poissonnier-Desparrières, *Traité des fièvres des l'Isle de St. Domingue* (Paris, 1763); Richard Brocklesby, *Economical and Medical Observations in Two Parts. From the Year 1758 to the year 1763 inclusive. Tending to the Improvement of Military Hospitals, and to the Cure of Camp Diseases, incident to Soldiers* (London, 1764); James Grainger, *An Essay on the More Common West-India Diseases and the Remedies which that Country itself produces* (1764); Abraham Mason, "Extract of a Letter to the Rev. Thomas Birch…from Mr. Abraham Mason of Barbados, relating to an extraordinary agitation of the sea there, 31st of March 1761, and an epidemical disorder in that Island, papers published in the Transactions of the Linnaean Society" *Philosophical Transactions*, 52, (1764): 477-78; Lionel Chalmers, *An Essay on Fevers* (Charleston, S.C., 1767); James Lind, *Essay on Diseases Incidental to Europeans in Hot Climates with the Method of preventing their fatal consequences* (London, 1768); William Sandiford, "An Account of a Late Epidemical Distemper, extracted from a letter addressed to Gedney Clarke, esq published in *Medical Observations and Inquiries,* 4 (1768):305-320; George Milligen Johnston, *A short description of the province of South-Carolina : with an account of the air, weather, and diseases, at Charles-Town ; written in the year 1763* (London, 1770); Desportes Poppé, *Histoire des Maladies de St. Domingue,* 3 vols. (Pairs: LeJay, 1770); Charles Blicke, *An Essay on the Bilious or Yellow Fever of Jamaica, collected from the Manuscript of a late Surgeon* (London, 1772); John Coakley Lettsom, *Reflections on the General Treatment and Cure of Fevers* (London, 1772); Thomas Mante, *The History of the Late War in North America and the Islands of the West Indies* (London, 1772); Bertrand Bajon, *Mémoire pour servir à l'histoire de Cayenne et de lay Guyane Français,* 2 vols. (Paris: Grangé, 1771-1778); James Hendy, *An Essay on Glandular Secretion; containing an experimental enquiry into the formation of pus* (1775).

American Independence and the end of the Wars of the French Revolution, the rate and quantity of publications accelerated. Imperial medical officers inundated readers and metropolitan institutions with new facts and observations on East and West Indian fevers. This later spate of texts was mostly concerned with debating contagion. In printed texts, this group of authors retrospectively analyzed what they had witnessed on the front lines of Anglo-French warfare.[2] Anglophone authors contended that British medical teaching

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[2] These publications are listed in chronological order: Bertin, M., *Mémoire sur les maladies de la Guadeloupe* (Guadeloupe: J. Bernard, 1778); John Quier, *Letters and essays on the small-pox and inoculation, the measles, the dry belly-ache, the yellow and remitting and intermitting fevers of the West Indies,* (London 1778); Robert Robertson, *Physical Journal Kept…during Three Voyages to the Coast of Africa and the West Indies* (1779); Benjamin Moseley, *Observations on the Dysentery of the West Indies* (Jamaica, 1780); Andrew Wilson, *Rational Advice to the Military, when exposed to the inclemency of hot climates and seasons* (London, 1780); John Polus Lecaan, *Advice to the Gentlemen in the army of Her Majesty's forces in Spain and Portugal: with a short method on how to preserve their health* (London, 1780); Thomas Dancer, Thomas. *A brief history of the late expedition against Fort San Juan, so far as it relates to the diseases of the troops: together with some observations on climate, infection and contagion; and several of the endemial complaints of the West-Indies* (Kingston, 1781); John Rollo, *Observations on the diseases which appeared in the Army on St. Lucia, in December, 1778; January, February, March, April, and May, 1779,* 2nd ed. (London: 1781); Dennis Ryan, "Farther Remarks on the Method of treating the Remittent Fevers of the West Indies; with Observations on the Best means of preserving Health in Jamaica," *London Medical Journal, 2* (1782): 63-80; Robert Robertson, *Observations on the jail, hospital, or ship fever.* (London,1783); James Hendy, *A Treatise on the Glandular Disease of Barbadoes; proving it to be seated in the lymphatic system* (1784); John Rollo, *Remarks on the Disease lately described by Dr. Hendy under the Appellation of the Glandular Disease of Barbados* (London, Printed for C. Dilly 1785); John Hunter, *Observations on the diseases of the army in Jamaica; and on the best means of preserving the health of Europeans, in that climate.* (London, 1788); Leonard, Gillespie, "An Account of the Means Employed on Board His Majesty's Sloop *Weasel* to preserve the Health of the Crew during a Voyage to Africa and the West Indies," *Gentleman's Magazine,* 57 (1788), 709-10; James Hendy, *A Vindication of the opinions and facts, contained in a treatise on the Glandular Disease of Barbadoes* (1789); Benjamin Moseley *Treatise on Tropical Diseases: On military operations; and on the climate of the West-Indies* (London, 1789); Robert Robertson, *An Essay on Fevers: wherein their theoretic, genera, species and various denominations are, from observations and experience, for thirty years, in Europe, Africa, and the intermediate Seas, reduced to their characteristic Genus,* (London, 1790); John Bell, *An Inquiry into the Causes which Produce, and the means of Preventing Diseases among British Officers, Soldiers and Others in the West Indies* (London: J. Murray, 1791); Robert Jackson, *A Treatise on the Fevers of Jamaica* (London, 1791); Robert Robertson, *Observations of Fevers and other Diseases which occur on Voyages to Africa and the West Indies* (London, 1791); John Peter Wade *A paper on the prevention and treatment of the disorders of seamen and soldiers in Bengal* (London, 1793); Colin Chisholm, *An Essay on the Malignant Pestilential Fever introduced into the West Indian Islands from Boullam, on the Coast of Guinea* (London: Printed for C. Dilly, in the Poultry, 1795); George Carter, *An essay on fevers, particularly on the fever lately so rife in Charleston, South-Carolina* (Charleston, 1796); Joseph Mackrill, *The History of Yellow Fever* (Baltimore, 1796); Dr. Maclarty, "History of a Case of the Epidemic Fever of Jamaica terminating successfully; in which a very large quantity of Mercury was employed, without any obvious Operation during the Fever," *Annals of Medicine,* 1 (1796), 328-33; James Clark, *A treatise on the yellow fever as it appeared in the Island of Dominica* (London, 1797); Hector, McLean, *An Enquiry into the*

insufficiently explained transmission or movement of fevers and a range of other epidemic ailments they had encountered in naval ships, field hospitals, ports, garrisons, and plantations in the Caribbean and other tropical environments.

The nosologies of Edinburgh physician William Cullen and French naturalist François Boissier de Sauvages, which purported to definitively capture the essential characteristics, qualities, and treatment of all febrile diseases, came under scrutiny. In a spate of publications on fevers, their classification, and treatment, British military and naval medical officers stationed in West and East Indian theaters of warfare questioned the authority of London's Royal College of Physicians, Cullen's system, British medicine's adherence to humoral theories of illness and its tendency to rely upon symptoms to differentiate between different types of epidemic maladies. These colonial medical officers argued that their own first-hand encounters with fever epidemics in the East and West Indies enhanced their understanding of the minute distinctions between

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Nature and Causes of the Great Mortality Among the Troops at St. Domingo (London, 1797); William Wright, "Practical Observations on the Treatment of Acute Diseases, particularly those of the West Indies," *Medical Facts and Observations,* 7, (1797): 1-25; James Anderson, *A Few Facts and Observations on the Yellow Fever in the West Indies,* (Edinburgh, 1798); William Lempriere*; Practical Observations on the Diseases of the Army in Jamaica as they Occurred between the Years 1792 and 1797* (London, 1799); John Linning and Robert Whytt, *A description of the American yellow fever, which prevailed at Charleston, in South Carolina, in the year 1748* (Philadelphia, 1799); Leonard Gillespie, *Observations on the Diseases which Prevailed on Board a Part of H.M.'s Squadron on the Leeward Islands Station between November 1794 and April 1796* (London, 1800); William Fowle, *A practical treatise on the different fevers of West Indies* (London, 1800); Thomas Winterbottom, *Some observations relative to the climate and diseases of Sierra Leone* (1800); Colin Chisholm, *An Essay on the Malignant Pestilential Fever, Introduced into the West Indian Islands from Boullam, on the Coast of Guinea* (London, 1801); Thomas Clark, *Observations on the Nature and Cure of Fevers, and the Diseases of the West and East Indies, and of America* (Edinburgh, 1801); Pierre Campet, *Traité practique des maladies graves qui règnéer dans le contrées situées sous la zone torride* (Paris, 1802); David Grant, *An Essay on the Yellow Fever of Jamaica* (Kingston, 1801); Thomas, Dancer, *Strictures on Dr. Grant's Essay on Yellow Fever* (London, 1802); J.F. Eckard, "Correction of Chisholm's Misstatement respecting the Prevalence of the Malignant Fever at St. Thomas's' *Medical Repository,* 2nd series, 1 (1804), 336-8; George Davidson, "Practical and Diagnostic Observations on Yellow Fever, as it Occurs in Martinique," *Medical Repository,* 2 (1805): 244-52; Jean Baptiste Leblond, *Observations sur la fièvre jaune et sur les maladies des tropiques* (Paris, 1805); Edward Bancroft, *An Essay on the disease called yellow fever* (London, 1811).

different types of fevers, which varied by season and region, and seemed more violent and rapid in their progress. Their work in military and naval hospitals, medical officers argued, justified their critique and revision of established medical theories.

Contemporary scholarship focuses on the contributions of colonial medical men to British metropolitan medicine, positioning imperial medical officers at the vanguard of the "reform" of British medicine ostensibly taking place at the end of the eighteenth century. This literature grants special attention to the stress that this particular group of colonial actors laid upon pathological examination and empirical observation. This literature points to these elements of military medical men's medicine to position this group as the vanguard of proto-modern medical practice. Imperial medical officers' quantitative practices and pathological investigations are positioned as practices that nudged metropolitan institutions and universities toward the path of medical modernity. Within this narrative, this group of historical actors become the British colonial antecedents of Parisian infirmary medicine and the French (modern) clinical approach to disease. [3]

Rarely mentioned but a formative component of colonial practitioners' thinking was the importance they ascribed to their work as *taxonomists* of disease. They took great pains to press the seemingly proto-modern medical activities chronicled by scholars into the service of disease classification, an enterprise much more theoretical and system-based in its immediate goals than the long-term empirical and clinical consequences of

[3] Mark Harrison, *Medicine in an Age of Commerce and Empire, Britain and its Tropical Colonies, 1660-1830* (Oxford: Oxford University Press, 2011), 1-28; Othmar Keel, "Was Anatomical & Tissue Pathology a Product of the Paris Clinical School or not?" *Clio Medica,* 50 (1991): 117-186; idem, "The Politics of Health & the Institutionalization of Clinical Practices in Europe in the second half of the Eighteenth Century," in W.F. Bynum & Roy Porter eds., *William Hunter and the Eighteenth Century Medical World* (Cambridge: Cambridge University Press, 1985), 205-256; Catherine Kelly, *War and the Militarization of British Army Medicine, 1793-1830* (London: Pickering and Chatto, 2011), 1-10.

this work that scholars have celebrated. Indeed, scholars' emphasis on long-term consequences of imperial medical men's work in advancing British medicine towards a more clinical model eclipses the effects of imperial men's ideas on the medical cultures of their immediate environs. Attending to the larger taxonomic quagmires produced by West Indian fever analysis—namely whether the infectious fevers appearing in the Caribbean were variants on European fevers or entirely new disease entities distinctive to the region or to the season or year—yields a picture of the productive consequences of fever writers' arguments.

Analysis of these debates shows that they generated a new methodology that West Indian practitioners used to designate the essential features of the fevers they encountered. This chapter excavates the development among this group of West Indian fever theorists of a quasi-coherent research agenda on fevers—a core set of questions animating their writings and debates—and a concomitant set of investigatory practices. It shows these questions and practices as ones developed through a *process* of disagreement among contemporaries. The creation of a loosely articulated research program and a corresponding set of investigative practices among West Indian practitioners, I argue, emerged from the dialogue between the broadly shared conceptual framework of disease etiology, *and* the material conditions of warfare and agriculture in the late-eighteenth century Caribbean in which they undertook their classificatory work.

The rapid movement of bodies, ships, and pathogens brought on by imperial conflict in the late-eighteenth century Caribbean precipitated the wide variability in the expression of yellow fever. One outcome of fever epidemics that occurred was the comparison and exchange of patient case studies between mid-Atlantic practitioners in

North America and their West Indian colleagues.[4] But instead of turning to the transatlantic dimensions of fever analysis, this chapter focuses the exchange of case studies within the Greater Caribbean. Material conditions unique to the region and debates among West Indian practitioners, I argue, produced three key investigatory practices that would inform the study of other non-febrile maladies on plantations.

This chapter focuses primarily on debates that occurred among a highly vocal and prominent group of West Indian physicians—John Hunter, Thomas Dancer, Colin Chisholm and George Davidson—who became fever theorists through their work in the Windward Islands and Jamaica in the final two decades of the eighteenth century. Geopolitical and commercial developments that occurred at the end of the eighteenth-century had particular resonance with the individual practitioners in this group; at different moments in their careers each held appointments as plantation surgeons and/or civilian and British military hospital physicians.[5]

The appointments of Chisholm, Dancer, Davidson and Hunter in military and civilian hospitals in the West Indies is significant because these positions shifted their thinking away from the analysis of the idiosyncratic and individual bodies of elite patrons and clients, a mode characteristic of the medical thought of practitioners working in metropolitan Britain.

Colin Chisholm arrived in Grenada in the last decade of the eighteenth century with an M.D. from the University of Aberdeen. Between 1794-1798 he maintained two appointments: one as the presiding surgeon on the Westerhall estate and the other as the

[4] Katherine Arner, "The Malady of Revolutions: Yellow Fever in the Atlantic World, 1793-1828," (Ph.D. Dissertation, Johns Hopkins University, 2013), chapter 2.
[5] Roberts argues for a 3% annual decline in slave populations on plantations in Jamaica and Barbados during the 1790s, *Slavery and the Enlightenment,* 162-63.

surgeon to the Army Ordnance on the island. He resigned both positions in 1798 and relocated to his cotton estate in Demerara.[6] A feature of Chisholm's work that set him apart from the other fever theorists examined in this chapter is that the bulk of his work supported a contagionist view of disease—the argument that fevers originated in the decay of patients suffering from fevers and could be transmitted through human contact with the sick. The Jamaican Thomas Dancer arrived in Spanish Town in 1773 and in 1780 served as the physician to a force of around 500 British regulars and Jamaican volunteers, accompanying them on a clandestine mission to capture and retain Fort San Juan (in present-day Nicaragua). The following year, the colonial assembly promoted Dancer as the physician to the hospital at Bath, Jamaica, which placed a large number of civilian invalids and occasionally nearby plantation slaves under his oversight and administration.[7] Of George Davidson less is known. He is referred to as Dr. Davidson and appears to have tacked back and forth between Barbados, Martinique, and St. Vincent from 1780-1800. A correspondent of both Colin Chisholm and the Philadelphia physician Benjamin Rush, Davidson worked at the civilian hospital in St. Vincent. His other activities included the inspection of the crews on board several ordnance ships arriving in Martinique in 1795, an analysis of dirt-eating, and assistance to Colin Chisholm in a case of yaws. In Fort-Royal, Martinique he also attended several dissections of yellow fever

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[6] Douglass Hamilton, *Scotland, the Caribbean and the Atlantic World, 1750-1820* (Manchester: Manchester University Press, 2005), 71-74; 213-14.

[7] Thomas Dancer, *A Brief history of the late Expedition against Fort San Juan, so far as it relates to the diseases of the troops: together with some observations on climate, infection, and contagion; and several of the endemial complaints of the West-Indies. By Thomas Dancer, M.D. Physician to the Troops on that Service*, (Kingston: Printed by D. Douglass & W. Aikman, and sold by them at the Royal Gazette Printing-Office, 1781); For Dancer's appointment to the Bath Hospital see idem, *A Short Dissertation on the Jamaica Bath Waters* (Kingston, 1784). For his interactions with the Middleton plantation in St. Thomas in the East during his hospital appointment see idem., "Case of a Negro Turning White; Communicated by Mr. T. Dancer, of Kingston, Jamaica," *The Medical and Physical Journal,* 8 (August 1, 1802), 96-97.

victims occurring in the civilian hospital.[8] John Hunter, best known for his 1788 work *Observations on the Diseases of the Army in Jamaica* received an appointment as physician to the army in 1777. From 1781-83 he oversaw soldiers' treatment and provisions as superintendent of the military hospital in the island. The experiences of this group of medical men encapsulate the ways in which appointments in the military oriented Caribbean practitioners' analysis towards the investigation of commonalities and differentials marking off large groups of patients.

The convergence of key demographic and social developments in the British West Indies in the late eighteenth century reshaped practitioners' intellectual framework and subsequently generated a new, Caribbean-specific ecology of fever knowledge. The persistent population declines and unprecedented mortality rates among both British troops and African slaves on sugar estates recently reemphasized by military and slavery historians—the staggering death rates among slaves and white troops in the region coupled with the massive influx of African slaves and British military regiments disembarking at a breakneck pace from slavers and naval transports in Kingston and St. George's—formed the common ground for these fever theorists' work.[9]

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[8] For Davidson's inspection of ordnance ships and yellow fever dissections in St. Vincent and Fort-Royal see George Davidson, St. Vincent July 22, 1796 to Benjamin Rush, Philadelphia in Rush Family Papers, Vol 37, Yellow Fever letters, Historical Society of Pennsylvania; idem, "Article III: Observations on the Yellow Fever and its Proximate Cause. In a letter from Dr. George Davidson, dated Port-Royal Martinique, Sept 20, 1796 to James Mease, M.D. Resident Physician of the Port of Philadelphia," *The Medical Repository of Original Essays and Intelligence* (November 1, 1797): 165-171; Davidson's expertise in the treatment of yaws is mentioned by Colin Chisholm, "Cases of Yaws and Leprosy, treated with nitrous acid and Oxygenated Muriate of Potash," *Annals of Medicine for the Year 1800*, 5 (Edinburgh: Bell and Bradfute, 1801): 395-401, citation p. 396.

[9] On troop mortality rates at the end of the eighteenth century see Roger Norman Buckley, *The British Army in the West Indies: Society and the Military in the Revolutionary Age* (Gainesville: University Press of Florida, 1998). Justin Roberts argues for a 3% annual decline in slave populations on plantations in Jamaica and Barbados during the 1790s, *Slavery and Enlightenment* (2013), 162-63.

Three distinctive investigatory practices emerged from this convergence. The unprecedented movement of groups of largely male, laboring, European, creole, and African populations into the region prompted fever theorists to analyze labor conditions and native environment rather than sex and age as predisposing causes determining a population's susceptibility of different groups to fevers. The regular internment of these populations in confined spaces of bodily and moral discipline, such as forts, garrisons, jails, ships, and plantations, made the natural and human environment a significant area of investigation to determine the *process* by which infection occurred through human and plant agents. Finally, the ephemerality of working peoples' lives in West Indian military and agricultural labor regimes made the wide-scale dissection of fever victims' bodies possible. This last condition sadly enabled theorists with opportunities to identify a fever's proximate or pathological origins and to demarcate different fevers on the basis of its distinctive course through its victim's organs.[10]

This chapter is divided into four parts. The first section lays down the basics of eighteenth-century disease etiology as elaborated in the West Indies and describes the meanings of *predisposing, remote*, and *proximate* causes for non-specialist readers. Etiology functioned as the intellectual scaffolding upon which practitioners based their investigations. This section describes how this group selectively appropriated and applied elements of disease etiology to the study of infectious fevers. Sections two through four analyze convergence between practitioners' understanding of *predisposing, remote, and*

[10] The working conditions that created conditions for post-mortem dissections on a large scale include the pauperization of merchant marine crews, the impressment of naval sailors, the assignment of British soldiers to West Indian campaigns far distant from place of their origin, and arrival of African and Afro-Caribbean slaves in new plantation frontiers and in Jamaica's ports. All of these developments created populations whose bodies were widely available for post-mortem dissections.

proximate causes and link these specific investigatory agendas to the material conditions in which West Indian fever theorists worked. These sections show how the combination of material conditions and intellectual frameworks produced three distinctive investigatory practices. In the conclusion I highlight the larger implications of the emergence of this new method of disease investigation for the study of plantation ailments.

I. Caribbean Fevers and Disease Etiology in Practice

The mutability of West Indian fevers along with the insufficiency and inconsistency of extant systems of nosology forced practitioners' return to etiology as their primary tool for the distinction between different types of contagious disease. Environmental and military histories fixating on the imperial and social impact of yellow fever in the Caribbean during the long eighteenth century have often overlooked this element of practitioners' diagnostic framework. Instead this scholarship focused on practitioners' passing description of telltale symptoms, such as yellow pallor, black bile, and the eruption of morbid-looking purple spots across the skin, to retrospectively identify yellow fever as the cause of non-combatant troop mortality and to invoke yellow fever to explain slaves' seeming invulnerability to devastating fever epidemics.[11] In so doing, this scholarship misconstrued the intellectual framework West Indian fever

[11] David Geggus, "Yellow Fever in the 1790s: The British Army in Occupied Saint Domingue," *Medical History,* 23 (1979): 38-58; idem, "The Cost of Pitt's Caribbean Campaigns, 1793-1798," *The Historical Journal* 26 (1983): 699-706; Paul Kopperman, "The British Army in North America and the West Indies, 1755-83: A Medical Perspective," in Paul Kopperman, ed. *Military and Naval Medicine, 1680-1830* (2010), 51-80; J.R. McNeil, *Mosquito Empires: Ecology and War in the Greater Caribbean, 1620-1914* (Cambridge: Cambridge University Press, 2010); Wilma Bailey, "The Geography of Fevers in Early Jamaica," *The Jamaican Historical Review,* 10 (1973):23-31.

theorists and their counterparts throughout the Atlantic world used in the interpretation of disease.

As taxonomists of fever, West Indian medical men were familiar with the nosologies of the celebrated University of Edinburgh faculty member William Cullen as well as that of the French naturalist François Boissier de Sauvages. Cullen's and Sauvages' systems for classifying different ailments as diseases served as jumping off points in West Indian medical men's investigation of fevers. The nosologies of Cullen and Sauvages provided a working system for grouping and differentiate symptoms so as to organize the fevers (and other epidemic ailments) any practitioner encountered into distinct genera and species. For imperial medical men, the work of Cullen and Sauvages significantly augmented the eighteenth-century diagnostic armamentarium and provided medical practitioners with an organizational methodology that enabled them to study, analyze and organize different types of non-chronic diseases in relationship to one another. But medical men writing on fevers who were resident in the tropical colonies of the British Empire and in the southern United States also stressed that extant taxonomic systems did not account for the violence and malignancy characteristic of fevers in the torrid zone. These features, West Indian fever writers argued, suggested the fevers of particular seasons or in a particular archipelagic cluster might be an entirely distinctive species of disease from those encountered in the British Isles, North America, and in previous years in the West Indies. Metropolitan theories and systems of disease classification based on symptoms provided a useful starting point: they suggested a template upon which practitioners could organize the symptoms they encountered and offered a methodology for correlating clusters of symptoms with a particular ailment. But

practitioners in the West Indies and elsewhere also cited the limitations and excessive rigidity of extant disease taxonomies.

Symptoms were especially insignificant for practitioners seeking to identify and differentiate between different types of *contagious* fevers. A fever was defined as contagious if it had its origins in human (as opposed to vegetable) effluvia and could infect others who came in proximity of the fever patient. Writing in the wake of the global yellow fever pandemic of 1793-95, both Chisholm and Hunter denied the existence of a distinctive species of yellow fever on the basis of its yellow pallor. For Chisholm, the vernacular term "yellow fever," and even the symptoms that were the basis for this name did not capture the essential and unique characteristics of fevers he witnessed in Grenada. Yellow pallor and intense vomiting were not, for Chisholm, definitive elements of the fevers he studied. Instead Chisholm differentiated different species of fever from one another on the basis of their violence, their pathological origin, and the way that they spread. Fevers would be differentiated from one another on the basis of whether they possessed the following attributes: malignant (lethal), bilious (originating in the putrefaction of patient's bodies and the production of excessive bile), and contagious (originating in human matter and spread through contact with the sick).

Hunter's denial of the existence of yellow fever in Jamaica as a new and unique species of disease also testifies to the limited value of symptoms for practitioners attempting to define fevers according to their discernable attributes. "Yellow fever" for Hunter referenced a vernacular term, one incorrectly positing the existence of a new malady on the basis of yellow pallor common among its victims. It has been customary," Hunter intoned, "to call the prevailing fever by the name of the yellow fever." But "the

fever, which has of late made such havoc among our sailors and soldiers in the West Indies, appears not to be anything different from the remittent fever, which has at all times proved the destruction of European armaments, in those parts of the world," he professed. Hunter named the fever he encountered in Jamaica the "Jamaican remittent," a variation, he argued, of other fevers he and his peers had witnessed previously in Europe, North America, and the West Indies during the Seven Years War. The Jamaican remittent was "similar to what have been called marsh, and remittent fevers," Hunter wrote. Hunter characterized the remittent fevers of Jamaica as "more formidable in their attack, quicker in their progress, and much more fatal in their termination, than what are seen in Europe."[12] Hunter supported this radical claim with "the earliest accounts we have of West India diseases." He proceeded to describe fever epidemics described by historians who had chronicled English and later British invasions in the Caribbean. He began with Cromwell's Naval invasion of Hispaniola and ended with the 1780 invasions of French West Indian islands. The species of fever, Hunter argued, that decimated British regiments during the 1741 invasion of Cartagena, the 1763 occupation of Havana, and during the more recent campaigns in Martinique and St. Lucia was a remittent, the same malady that plagued British troops in North America and Flanders during similarly onerous occupations and land campaigns. [13] Hunter's account exemplifies the importance for theorists of historical comparison. Practitioners throughout the Atlantic consulted descriptions of other fever epidemics charted in ancient and contemporary medical texts and frequently invoked their first-hand encounters during their military appointments in other parts of the Empire because they required a comprehensive overview and

[12] Hunter, 12.
[13] Ibid., 46.

comparison, rather than the presence of a telltale symptom, before committing to a particular designation.

Hunter did not write off the violent symptoms that we now associate with yellow fever; descriptions of yellow pallor, black bile, and morbid purple spots appearing on patients' flesh punctuated the patient case studies in Hunter's essay. The dramatic presence of these symptoms among soldiers stationed in the West Indies inhibited Hunter from perfectly shoehorning the febrile maladies of Jamaica into the traditional symptomology of the remittent fever. The Jamaica remittent, Hunter conceded, looked in many ways quite different than it had in Europe. Yellow pallor, black bile, and purple blood-spots did not appear in European authors' depictions of the remittent. Hunter, however, used manifestation of these symptoms among the patients in the Jamaica garrison to buttress his classification of the ailment as a regionally-specific remittent, a fever whose appearance varied according to the season and the Caribbean's distinctive climate, but was not distinctively different from that which was known in Europe. "The yellow fever," he continued, "is neither a different disease, nor do all the sick, even in fatal cases, turn yellow." Hunter pointed to prevailing weather patterns and the constitutions of different military populations as reasons behind the great variation in the appearance and behavior of the remittent fever across time and space.

Hunter even wrote off the alarming and startling appearance of jaundice in his fever patients, attributing it to the remittent's intensity in Jamaica during certain times of the year and among certain patient populations. "The addition of jaundice to the fever, is certainly much more frequent in some seasons than in others," Hunter noted. That many of the British soldiers convalescing in Jamaica's military hospital from remittent fevers

were newcomers to the region also explained the presence of jaundice in their cases. Jaundice, Hunter explained "has upon all occasions chiefly affected those, who have lately arrived in the country." "The remittent fever, when of a bad kind, at all times, and in all countries, is often accompanied by jaundice." The large presence of foreign-born European soldiers in the West Indies during the War of American Independence and the Wars of the French Revolution explained why "we have heard most of that fatal disease, during military operations in that quarter of the world."[14] In Hunter's view, the seasons and the physiologies of the soldiery sent to the Caribbean altered the expression of the remittent fever in the Caribbean, making its appearance more violent and virulent. For Hunter, jaundice did not indicate an entirely distinctive kind of disease but was a condition that developed in particularly severe cares of remittent fever occasioned by the physiologies of its victims and the season of the year. Hunter's attention to the constitutions of the remittent's victims and the prevailing weather patterns exemplify the emphasis practitioners placed on seasonal weather patterns, the composition of a region's air, and the physiologies of the patient or population to explain wide variation in the expression of the same disease.

Hunter, Dancer, Davidson, and Chisholm pointedly downplayed the diagnostic importance of what are now held as symptoms characteristic of yellow fever. In fact, their strenuous dismissal of the importance of what are now seen as yellow fever's telltale symptoms—black bile and yellow pallor— show us that eighteenth-century practitioners employed very different criteria in determining a fever's identity than the scholarship addressed at the start of this chapter has led us to believe. When attempting to identify a

[14] Hunter, 319.

specific species of fever, West Indian practitioners and their counterparts elsewhere inherited an elaborate diagnostic system. The chronology of the fever—the number of days between their start, peak, and remission in patients, rather than its specific physical symptoms—formed the rudimentary edge tool in practitioners' diagnostic arsenal. Contagious maladies (including fevers) were identified from one another more specifically according to the combination of their causes. A more nuanced understanding of eighteenth-century diagnostics, particularly with respect to the role of etiology, must enter into any consideration of the development of West Indian fever methodology and its subsequent application to the study of other ailments in the region.

Explanatory systems of causality based in classical philosophy undergird the taxonomic thinking of West Indian fever authors and their counterparts throughout the globe. Such systems postulated the necessity of unearthing and identifying the individual or cluster of causes for a given natural phenomena such as a hurricane, an epidemic, or the ripening and fermentation of comestibles. Ascertaining the multifactorial causes, classical philosophy maintained, was a vital precursor to understanding these natural phenomena in their totality. In the seventeenth and eighteenth centuries, medical authors employed classically-based systems of causality in the study of a range of chronic and epidemic ailments. In this schema, symptoms, as the manifestation of an ailment's proximate (pathological) origins, were but one of many causes that a diagnostician might choose from in his depiction of a disorder. When medical authors invoked either the proximate, exciting/ remote, or predisposing causes they were in effect pointing to very different phenomena to explain an ailment's origins. Moreover, by identifying a disease's

specific set of origins, practitioners claimed to understand its essential identity in relationship to other types of illness.[15]

West Indian practitioners prioritized the investigation of an ailment's etiological origins and maintained that this line of inquiry best allowed them to identify and differentiate between numerous species of fevers. In identifying the most significant causes of an ailment, theorists believed they could cut through the often confusingly inconsistent patterns of symptoms through which an ailment expressed itself in different patients and instead hone in on its essential identity. Like their counterparts elsewhere, the language of causes that Caribbean practitioners used was a specific medical vocabulary associated with University medical curriculums. This medical language of causes was invoked by writers to capture an ailment's defining characteristics. The term *proximate causes* described the pathological seat of a disease. While the patient was alive, practitioners clustered symptoms together to speculate on the pathological origin of the disease. Symptoms grouped together, they held, revealed the way an ailment had travelled from its originating organ to compromise the corresponding systems of the human body. The practice of grouping symptoms together and linking them to disturbances in the internal parts of the body that could not be physically seen while the patient was alive enabled practitioners to speculate on the pathological origin and progress of a fever. Post-mortem dissections of fever victims, in contrast, allowed West Indian practitioners to scrutinize the way a fever had affected different organs and to visualize how it had traveled and corrupted the internal organs in a manner that was not

[15] My summary of the medical languages of causes is based on Margaret Pelling, "The Meaning of Contagion, Reproduction, Medicine and Metaphor," in *Contagion: Historical and Cultural Studies*, Alison Bashford and Claire Hooker, eds. (Oxford: Routledge, 2005), 15-38.

possible using symptoms alone. The opening up of dead bodies conclusively determined the fever's *proximate* cause and provided a large portion of the empirical evidence requisite for the disease's subsequent classification.

The terms *remote* or *exciting causes* were terms that designated between the topographic or human origins of an ailment. Once an ailment's remote/exciting cause was identified, the writer could make arguments about whether it remained fixed or endemic to a particular place or whether it moved across space to infect other materials and matter. Remote and exciting causes were thus terms that both designated between the external origins of an infection and described a *process* of infection. If they believed that an ailment could move to infect others, practitioners stressed the importance of determining whether the remote cause originated in miasmas and poisonous vapors emanating from the decayed vegetable matter, like coffee grounds on ships or large concentrations of decomposing vegetation in the vicinity of still water, as was found near swamps and ponds. The search for remote or exciting causes also extended the possibility that infectious matter could be carried across distances. This possibility incited practitioners to identify whether the exciting cause originated in a human patient, as a *contagion* that emanated from the sick in confined places to those in the immediate vicinity. Remote causes could either originate as miasmas (produced as a gas from decaying vegetable matter) or contagion (produced from the body of the sick and spread through human contact, often in confined quarters). The distinction between the two types of remote causes (miasma or contagion) was an important one to eighteenth-century fever theorists.

One further complication: the designation of a fever's remote origins in miasma did not preclude that fever from becoming contagious. For example, an overworked and

under nourished patient or group might sicken with a miasmatic fever (a fever they caught from breathing the noxious vapors emanating from a swamp). When the miasmatic fever ran rampant among a patient or group of patients worn down by poor diets or fatigue, it could become so violent that it would produce contagion—defined as the effluvia that emanated from the patients' sweat, exhalations, and other emissions. Contagion, in confined spaces, could infect humans in proximity to it. Exhaustion, poor diet, and passions run amuck in fevers' victims along with formidable bouts of heat and humidity were frequently cited by authors as factors that contributed to a miasmatic fever's transformation into a more violent and contagious form that could be spread through human contact. *Pestilential* was the term that described a fever's capacity to morph from one that originated in vegetable miasma into a contagious fever—that is a fever that capable of repropagating itself in the sick. A pestilential fever was one that could be spread through human contact with the ill.

Predisposing causes designated the physiology of individuals or groups that made them more vulnerable to an ailment. Fever theorists used this concept to refer to the role that "modes of living," a person's or group's diet, work, passions, and exposure played in creating constitutions that varied in their vulnerability to fevers and other types of ailments. This term occasionally referred to hereditary conditions.[16] More frequently, *predisposing causes* denoted the long-term cumulative effects of a patient's habits or lifestyle, such as residence in a particular climate, diet, emotional life, and demands of daily labors, in shaping his or her idiosyncractic constitution, that in turn, predisposed or

[16] Sometimes and very inconsistently authors cited *predisposing causes* as a shorthand for the heterogeneous cluster of physical characteristics now used to denote race—but this was rare until the very last decade of the eighteenth century and even then, the meaning of this phrase for authors was inconsistent.

made the individual or population more susceptible to an ailment or rendered it more violent and deadly in its manifestation.

West Indian fever theorists, like their peers throughout the British Empire and the new United States, invoked elements of the system of causality selectively. By foregrounding the significance of certain causes over others, medical authors throughout the Atlantic showcased the novelty of their explanations and addressed concerns about fevers pressing to their time and place. The commercial and imperial ambitions of various ports, colonies, empires and institutions in the Atlantic world determined the research agendas of their elite medical communities, particularly with respect to gauging the characteristics of epidemic diseases. A fever with certain characteristics could destroy the economic and imperial ambitions of one community while buoying the profits of another. For example, a fever deemed contagious provoked the implementation of quarantine measures and destroyed the profits of a port's merchant community.[17] Similarly, the susceptibility of European newcomers to a particular tropical fever destroyed the fabric of battalions raised from soldiers originating in the British Isles and compromised the success of long-planned invasions and campaigns. In the identification and classifications of a fever using classical systems of causality, local and imperial interests converged to determine which cluster or groupings of the fever's different *causes* (or its etiology) the elite medical community investigated.

The causes West Indian fever analysts selected to pursue in order to differentiate one febrile disease from another were by no means preordained. Analysis of the

[17] See for example, the economic consequences for different port cities in the Anglophone world that attended the designation of a local fever's status as "contagious" in Katherine Arner, "The Malady of Revolutions: Yellow Fever in the Atlantic World, 1793-1828," (Ph.D. Dissertation, Johns Hopkins University, 2013).

particular inquiries they pursued highlights, significantly, the importance of local material conditions and geo-imperial politics in determining the questions practitioners asked about the fevers under study. A telling example concerns the investigations of the Grenadian military physician Colin Chisholm, who concluded that there existed a separate species of malignant contagious fever, imported to the Caribbean from Atlantic slaving vessels that was distinctive from the endemic yellow fever of the Windward Islands. Chisholm differentiated the endemic yellow fever of Grenada from what he claimed was a new febrile disease on the basis of the differences in their *remote* causes. Writing in a period when the Caribbean became yet again a significant theater of Anglo-French warfare, Chisholm was similar to any number of fever theorists who sought to pinpoint the *remote* causes of fevers in the region in order to answer larger questions about the introduction and containment of febrile matter.

Throughout his text, Chisholm worked to distinguish the *remote* causes of what he described as a malignant fever from the endemic yellow fever of Grenada. He did so by studying its origins in human contagion and by pursuing investigations into the malignant fever's distinctive pathological origin. Chisholm defined the fever as malignant on the basis that its pathological or proximate causes lay in the human digestive system, which caused the production of excessive bile. But it was significant to Chisholm that the malignant and pestilential fever originated in human contagion and could be spread through contact with infected patients in hospitals, ships, and gaols, this feature of its mode of infection was what gave it the adjective pestilential. "We must consider it [the fever] as truly pestilential," Chisholm proclaimed in his 1796 *Essay on the Malignant and Pestilential Fever of Grenada*. In its mode of transmission, the fever

Chisholm witnessed in Grenada was very similar, he argued, to the plague. Here Chisholm did not mean that it manifested itself in the same symptoms as plague. Instead he was drawing a similarity between the two diseases on the basis of the way that they moved through space. The malignant and pestilential differed only "in not always exhibiting the symptoms that are said to be peculiar to that malady [plague]" Chisholm wrote. Chisholm arrived at this definition on the basis of "the diagnostic of this disease, from the *remote* and *proximate* causes, from the symptoms, [and] from the dissections…" he and his colleagues had undertaken.[18] Throughout his text, Chisholm maintained that the fever he had witnessed was pestilential in origin, or caused by human contagion. Chisholm did observe certain predisposing factors, such as a victims' mode of living. These predisposing causes, Chisholm qualified, might have rendered certain populations or individuals more susceptible to the malignant fever than others, but their vulnerability did not define the fever itself. Instead, throughout his text he positioned the remote and proximate causes of the malignant pestilential as his primary areas of inquiry.

Chisholm's emphasis on the remote causes allowed the Grenadian to address questions about the nature and origin of febrile diseases that were strategically significant to the island of Grenada, its geo-political position as a prominent theater of Anglo-French warfare, and its function as a port of call for merchant vessels from Europe and Africa. Chisholm directed his investigation into the remote origins of the fever. By implication, the process through which it spread was its most definitive attribute. Simultaneously, he minimized the power of its predisposing causes to differentiate the *malignant pestilential* from other species of fever besetting the region. In so doing Chisholm positioned the

[18] Chisholm, (1796), 148-49, my italics.

malignant fever's remote causes, particularly its origin in human-made pestilence as its most determinative element.

Local, professional, and imperial interests particular to the last quarter of the eighteenth century shaped the research agenda of Caribbean practitioners in their work to define and characterize the region's epidemic fevers. Fever researchers sought to conclusively pinpoint a specie's proximate causes, the bodily system that tropical fevers initially disrupted; to capture their remote causes, to distinguish especially between their human or plant-based modes of infection; and to identify the predisposing features or habits life (and the resulting constitutional dispositions) that made certain groups or populations highly susceptible to them. West Indian practitioners pursued the answers to these questions in part, to determine a fever's relationship to other known febrile and epidemic maladies and in order to affix its place within medical taxonomies of disease.

Just as important as extant medical frameworks available to characterize and classify a given ailment, the imperial and commercial economies of military and agricultural labor that made the British Caribbean a major theater of Anglo-French warfare exerted as powerful force in shaping the evolving research agenda of West Indian fever theorists. Analysis of how the human landscape of agriculture and warfare created the conditions for practitioners to investigate different etiologies is therefore necessary for elaborating our understanding of the development of Caribbean-specific research practices. In order to understand how this combination of theory and practice generated distinctive investigative methodologies, the following three sections focus on the convergence of the vocabulary of causes and material conditions unique to the region.

II. Exploring Predisposing Causes in Military and Agricultural Labor Regimes

Chisholm and Hunter maintained nearly opposite explanations for fever's causes and these rival positions alert us to the lack of consensus among West Indian observers about the identity of fevers they studied. But although these debates reveal conflict, they also reveal the available methods these practitioners employed to answer the larger classificatory conundrum of the novelty or similarity of West Indian and European fevers. Their definitions also point out the incommensurability of West Indian fever research methods with those pursued by medical faculties in other parts of the Atlantic world. Irrespective of their conclusions about the singularity or universality of the fever they studied, fever analysts, as this next section shows, methodically used populations of infantrymen, sailors, and plantation slaves to identify a fever's physiological (predisposing) origins.

Fever theorists from around the Atlantic repeatedly sought to identify the specific cluster of predisposing causes in their patients to explain why certain fevers seemed to present more violently in certain individuals or groups than others. The physiology of the patient played a large role in practitioners' understanding of an illness and its particular expression in symptoms. Along with books on venereal disease, smallpox, and other well-known distinctive and contagious diseases, fever texts also contained case studies of individual fever victims and groups. These case studies documented in rich detail their subject's sex, age, disposition, laboring conditions, stress as well as the atmospheric qualities of their immediate living environment. In these case studies, practitioners invoked these features of their patients "mode of living" to create a picture of the patient's constitution. Once established, a constitution accounted for why a fever had

expressed itself differently—in terms of its duration, symptoms, or violence—in that particular patient than it had in other cases.

Standard medical teaching in the British Isles held out the age and sex of the individual patient as the two most significant variables determining the timing and severity in the appearance of a disease as well as the itinerary it took as it proceeded to corrupt different systems of the body. Competent practitioners therefore made a habit of threading well-worn ideas about the constitutional differences between men and women as well as the young and old into their interpretation of symptoms at their patient's bedside. Age and sex functioned as a medical synecdoche for broader-ranging constitutional differences among individuals, ones that explained the staggering diversity in the physical presentation of a disease. This tradition rendered the effects of sex and age upon constitutions a fundamental research question of the larger project to expand the knowledge of disease.

Devastating troop mortality afforded medical men an opportunity to discard sex as a significant predisposing cause. In lieu of focusing on this feature of a patient's constitution, West Indian fever theorists focused on the predisposing cause of native environment in shaping a person's constitution. The deployment of European troops to the Caribbean afforded medical men the opportunity to study, on a large scale, bodies out of place: the effects that relocation from a native environment—its airs, waters, and soils—had upon a person's constitution.

The interest in the vulnerability of newly arrived Europeans to fevers was informed by the reinvigoration of the Hippocratic program, one that theorized the effects of airs, waters, and places on human constitutions. Eighteenth-century Hippocratic

thought maintained that the natural environment of a particular region produced specific constitutions among its inhabitants. West Indian fever investigators enthusiastically cherry-picked elements of this framework to theorize and explain why fevers tended to primarily affect newcomers to the Caribbean.[19] European susceptibility to fevers could be explained, they wrote, as the corporeal effects of these group's relocation from a temperate to a tropical environment. As Hunter explained, the forbidding heat of the day and humidity of the night in Jamaica acted upon newcoming troops like "one of many other poisons, to which the human body gradually accommodates itself." Europeans first arriving in the Caribbean experienced "in common language a seasoning," a process by which their bodies adjusted to the Caribbean environment. "New-Comers," to the region "are not only more subject to the disease, but in them it is the worst kind," he surmised. "The negroes who live in the marshy parts of this country, afford the most striking example of the power of habit in resisting the poison," he countenanced. "They are very little subject to the fever," Hunter continued, "and in them it is almost always slight."[20] For Hunter, Jamaica's white creole residents as well as its African and Afro-Caribbean slaves furnished living examples of how bodies gradually adjusted to relocation to an alien and forbidding natural environment.

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[19] European medical thought had long held that bodies existed in a symbiotic relationship with the air, water, and soil of their immediate environment. Since the early seventeenth century English colonists vocalized their anxieties about the havoc and destruction that removal to New World climates would wreak upon their health. Karen Ordahl Kupperman, "Fear of Hot Climates in the Anglo-American Colonial Experience," *William and Mary Quarterly*, 41 (1984): 213-240. If an individual's humoral balance existed in harmony with the airs and waters of a particular place, this theory maintained, then relocation to an alien climate, would throw that individual's humoral arrangement, previously calibrated and conditioned to a different environment, into total disarray. Medical theory of the late eighteenth-century, however, maintained that relocation to a new climate definitely caused havoc among the constitution and weakened the individual. But relocation to a forbidding tropical environment, practitioners in the late eighteenth century maintained, did not *cause* an illness. Rather, in this enervated state, the individual was more susceptible to externally-originating forces of disease.

[20] Hunter, 154-55.

Hunter drew upon the public historical imagination of the region's first conquistadors as well as his first-hand familiarity with the makeup of different expeditionary battalions to drive home the lesson of climate as a natural poison to which newcomers would gradually become inured through time but to which newcomers were also extremely vulnerable upon their immediate arrival to the region. "The history of the Buccaneers," he proclaimed, "furnishes many striking examples of Europeans becoming habituated to the climate of the West Indies, that they were enabled to bear the greatest hardships and fatigues, without suffering from disease."[21] "In the [1780] expedition against Fort St. Juan," he continued in his comparison of different populations in the Caribbean, "not one in twenty of the soldiers returned, whereas none of the negroes died of fevers." Hunter was one of a dozen physicians and surgeons stationed in the tropical theaters of British warfare who argued that relocation to a foreign environment was a key predisposing cause that explained a soldiery's susceptibility to tropical fevers and other epidemic disease that were endemic to an island.[22] During the periodic fever epidemics characteristic of the 1790s, these sickly laboring and largely white populations of European soldiers and sailors offered an intriguing case study on the effects the

[21] Ibid., 153-54.

[22] Other writers who foreground relocation as a determinate cause of susceptibility include John Lining, *History of Yellow Fever* (London, 1753); Gilbert Blane, *Candid Reflections on the Expedition to Martinico, with an Account of the Taking of Guadalupe by General Barrington* (London, 1759); William Hillary, *Observations on the Changes of the Air and the ConcomitantEpidemical Diseases in the Island of Barbados* (London, 1759); James Grainger, *An Essay on the More Common West-India Diseases and the Remedies which that Country itself produces* (1764); James Lind, *Essay on Diseases Incidental to Europeans in Hot Climates with the Method of preventing their fatal consequences* (London, 1768); Andrew Wilson, *Rational Advice to the Military, when exposed to the inclemency of hot climates and seasons* (London, 1780); John Polus Lecaan, *Advice to the Gentlemen in the army of Her Majesty's forces in Spain and Portugal* (London, 1780); Benjamin Moseley *Treatise on Tropical Diseases: On military operations; and on the climate of the West-Indies* (London, 1789); John Peter Wade *A paper on the prevention and treatment of the disorders of seamen and soldiers in Bengal* (London, 1793); Hector, McLean, *An Enquiry into the Nature and Causes of the Great Mortality Among the Troops at St. Domingo* (London, 1797).

forbidding, torrid, and humid Caribbean environment upon populations relocated from comparatively temperate spaces.

Still other fever writers underscored the persistence of sex and rank (a shorthand for constitution and habit) alongside the effects of an alien climate as determinative elements in a person's predisposition to fever. "Neither age nor sex was exempted from its [fever's] attack," Chisholm retrospectively reported in his 1795 book on the malignant fever of Grenada. Fever tended to primarily attack sailors, "more especially those robust and young, those least accustomed to the climate, and those most given to drinking new rum." It was equally pernicious upon groups of rank and file soldiers, "most especially recruits lately from Europe and the most intemperate." "All other white males," Chisholm explained, "especially the lower classes and of those most intemperate, those debilitated by recent sickness," as well as white females, "especially those connected with shipping and those lately from Europe," were primarily affected.[23] "The description of men by far the most obnoxious to this contagion, and who suffered most from it, were those lately arrived from Europe, and of them, those who had never been before to a hot climate," Chisholm summarized. For West Indian practitioners, the rapid change in the weather and climate experienced by newcomers to the Caribbean was often a more significant predisposing cause of their susceptibility to fevers than age or sex. Hippocratic ideas about the relationship between a person's health and their native environment undergird many of these claims.[24]

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[23] Chisholm, (1796), 99-100.

[24] On the Hippocratic revival in seventeenth and eighteenth-century British medicine and Syndenham's role see Denis Cosgrove, "Tropic and Tropicality," in F. Driver and L. Martins, eds. *Tropical Visions in an Age of Empire* (Chicago and London: University of Chicago Press, 2005), 197-216; Andrew Cunningham, "Sydenham versus Newton: The Edinburgh Fever Dispute of the 1690s between Andrew Brown and Archibald Pitcairne," in W.F. Bynum and V. Nutton, *Theories of Fever from Antiquity to the*

Chisholm's accounts of the morbid effects of an unforgiving foreign environment upon the fibers and fluids of newly arrived Europeans encapsulates the ways in which the presence of naval and military populations in the Caribbean provided fever theorists like Chisholm with an opportunity to integrate an array of new medical theories with their immediate experiences. If the Hippocratic program explained the effects of illness as a product of adjustment to an alien torrid environment, iatromechanism enabled fever theorists to specify, *anatomically*, why the torrid environment was so pernicious to newcomers. It was only in joining older classical ideas about human's relationship to their natural environment with newer paradigms outlining how the body responded to airborne poisons and contagions that fever theorists could explain the virulence of disease in the tropics.

Chisholm and his contemporaries joined the Hippocratic doctrine of the effects of airs, waters, and places with the seventeenth century iatromechanical tradition. Iatromechanical thought premised the existence of hidden systems of the human body, ones which practitioners could understand through analogical reasoning that likened the human body as a machine, a "set of tubes, engines, and implements whose behavior followed the laws of physics."[25] Iatromechanism specifically provided fever theorists with a vocabulary to explain the effects of the climate upon the fibers and fluids,

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Enlightenment: Medical History, Supplement No. 1 (London: Wellcome Institute for the History of Medicine, 1981), 71-98; idem "Sydenham and the 'Good Old Cause,'" in R. French and A. Wear, eds. *The Medical Revolution of the Seventeenth Century* (Cambridge: Cambridge University Press, 1989), 164-90; Mark Harrison, *Medicine in an Age of Commerce and Empire,* 30-52.

[25] Theodore M. Brown, "The College of Physicians and the Acceptance of Iatromechanism in England, 1665-1695," *Bulletin of the History of Medicine,* 44 (1970): 12-30; Underwood Ashworth, *Boerhhave's Men at Leyden and After* (Edinburgh, 1977); Harold J. Cook, "Boerhaave and the Flight From Reason in Medicine," *Bulletin for the History of Medicine,* 74 (2002): 221-40; Andrew Cunningham, "Medicine to Calm the Mind: Boerhaave's Medical System and Why it was Adopted in Edinburgh," in idem and Roger French, eds. *The Medical Enlightenment of the Eighteenth-Century* (Cambridge: Cambridge University Press, 1990).

theorized to be the actual materials of the human body. Newcomers from the British Isles and Europe, Chisholm explained, suffered more, because their longtime residence in the more temperate zones of the globe had molded their fibers and fluids in a manner that made it difficult for them to adjust to the demands of perspiration characteristic of a hot climate. "In general, those possessed of tense fibers were the most readily infected, and among whom the disease was most fatal."[26] When combined, Hippocratic thought and iatromechanism provided conceptual vocabularies that explained the physiological effects of relocation to a foreign climate. Theorists attached this theory to the doctrine of predisposing causes to explain how climate had molded the bodies of particular groups and why relocation to a new environment wreaked such havoc upon these specific populations.

The weight medical men writing about fevers gave to stress and labor as predisposing causes that explained a group's susceptibility to regional fevers constituted another crucial piece of their argument. From regiments, fleets, and large estates, Caribbean medical writers collected case studies of populations afflicted with fevers, a selection that shows the increasing importance that the working lives of people took on in medical interpreters' explanations for a fever's violence. The amount of labor extracted or expected from a particular group, fever theorists explained, rendered certain populations more susceptible to seasonal, contagious, and endemic fevers. West Indian military and plantation regimes created the human landscape within which West Indian medical faculty conducted their fieldwork and drew connections between toil and disease vulnerability.

[26] Chisholm, (1796), 94.

A broadly held tenet among military and medical circles was that West Indian campaigns were particularly destructive to soldiers' constitutions. "The sickness or health of troops," the Jamaican physician Thomas Dancer explained in his preface to his account of the 1780 San Juan expedition, "depends so much on their situation and movements, that he will be obliged to take some account of these; and it is therefore proposed to give first a succinct historical journal of the campaign, and then to make some general remarks on the endemial diseases of soldiers in the West-Indies."[27] The Jamaican military physician Hunter differed from Dancer, contending that fevers in the West Indies were caused by miasmatic poisons that were endemic to the region, whereas Dancer, a follower of Chisholm, believed they were contagious and thus originated in sickly human fever patients. Nevertheless, both Hunter and Dancer argued that the rigors of West Indian service during the War of American Independence made British soldiers more susceptible to Jamaica's maladies—whether they originated in the island's decaying vegetable matter or its human groups. "A regiment always loses a greater proportion of men the first year than afterwards, supposing the situation to be the same," Hunter wrote. Hunter ascribed this phenomenon to the fact "that the human frame acquires by habit a power of resisting noxious causes….Hence Europeans, after remaining sometime in the West Indies are less likely to be affected by the causes of fevers than on their first arrival."[28] "When fatigued by hard labour and long fasting," soldiers in the West Indies became more susceptible to miasmas, Hunter explained. In these circumstances, "the poison gains admission more readily into the body, and produces immediately the worst kind of fever." "It is in this way that soldiers suffer so much, on actual service, in the

[27] Dancer, *A Brief history of the late Expedition against Fort San Juan,* 1.
[28] Hunter, 19-20.

West Indies," Hunter narrated.[29] Fever theorists' configuration of environmental or seasonal poisons with accounts of different group's working experiences captures the emphasis medical men gave to stress and work as predisposing causes of fevers among soldiers who had resided in the Caribbean for varying lengths of time.

In making this argument, fever writers drew from the vernacular knowledge of military officers, who used a regiment's amount of seasoning and discipline to direct their selections in making up different battalions destined for West Indian campaigns. Testifying before the House of Commons, the commander of the British Army in North America Henry Dundas framed his rejection of a number of regiments intended for service in the Caribbean as a humanitarian effort to preserve British lives. The regiments rejected for service, Dundas explained, consisted of men who "were not sufficiently advanced in their discipline, and many of them were afterwards reported unfit to encounter the fatigues of a West India campaign."[30] In order to preserve the "health and lives of soldiers," especially those sent "from Europe to the West Indies," it was, according to Hunter, of utmost importance that the troops sent "should consist of well-disciplined and not newly raised men; for the latter being less orderly, and not accustomed to the life of a soldier…suffer greatly more from the climate than men habituated to discipline." This premise "was observable in all the young regiments sent to that part of the world," Hunter explained.[31] When they erected battalions comprised of regiments who had spent varying amounts of time in the West Indies and sent these

[29] Ibid., 155.
[30] Anon., *Facts Relative to the Conduct of the War in the West Indies: Collected from the Speech of the Right Hon. Henry Dundas, in the House of Commons, on the 28th of April, 1796* (London: printed for J. Owen, 1796), 36.
[31] Hunter, 22.

companies to face uniformly arduous conditions on protracted land campaigns, the architects of British war in the West Indies inadvertently created test cases for medical men to examine how exposure and stress might coincide with dislocation from native place to severely exacerbate epidemic fevers.

A significant but largely overlooked episode in the formulation of the relationship between toil and sickness in soldiers among Caribbean fever writers was the unsuccessful 1780 British expedition to invade and occupy the Spanish-held Fort San Juan. "Of the troops sent upon the expedition to Fort San Juan from Jamaica, scarcely a man ever returned," Hunter wrote in book on the diseases of the Army in Jamaica.[32] Notorious among military circles in Jamaica and throughout the Caribbean as a human catastrophe, the expedition also served as a lesson in the cumulative effects of work and exposure on the constitutions of a robust and battle-ready soldiery. In January of 1780, General Dahling erected a 500-large battalion in Jamaica and dispatched the troops on a secret expedition to occupy Fort San Juan.[33] The battalion shipped out of Port-Royal in February and by May had successfully ejected the Spanish garrison. Rampant fevers beset the troops not during the campaign and siege, from February-April, but when they occupied the fort in May of 1780. When fevers reached epidemic levels in September, General Dahling decamped his troops, (he left a minimal number of soldiers to garrison the fort), marched them back to the shore, and embarked them on transports bound for Jamaica. Upon their return, military and medical spectators marveled at the capacity and timing of the epidemic fevers and other maladies that beset the invading army. The troops

[32] Ibid., 48.
[33] The battalion consisted 200 regulars of the 60th and 79th regiments, 100 soldiers of Major Dalrymple's Loyal Irish corps, and 200 Jamaica volunteers. See Dancer, *A Brief History*, 1.

survived the journey to and siege of the fort, the most demanding component of the invasion. But upon the fort's occupation, they experienced ailments on a scale that inhibited the British expedition from establishing a permanent and defendable foothold on the Mosquito Coast.

The widespread susceptibility of all of the battalion's regiments to fevers made the expedition an intriguing case study on the ways that excessive toil, the one constant on the expedition, could facilitate the onset of epidemic disease. In 1781, Dancer, who had accompanied the expedition as the battalion's military physician, wrote a treatise in which he sought to identified the multi-factoral causes of widespread disease that coincided with the troop's occupation of the fort. [34] Dancer's account of the expedition incorporated the eighteenth-century iteration of Hippocratic ideas about the seasonality of particular diseases. Dancer and others maintained that many diseases were characteristic of a particular season; their appearance coincided with abrupt changes of weather. Rapid changes in the weather, he explained, accounted for the *chronology* of when "the whole army, both the soldiers and the Indians, began to fall sick" in the San Juan expedition. "The circumstances of a most unhealthy climate, the seasons, or incessant rains, alternating with the most extreme heats; the want of hospital, necessaries and accommodations, and sometimes of medicines, and it will not be wondered at, either that the troops became so sickly, or that so few recovered," Dancer explained.[35] Seasonal alterations in the weather along the rim of the Caribbean mainland generated the

[34] Thomas Dancer, *A Brief history of the late Expedition against Fort San Juan, so far as it relates to the diseases of the troops: together with some observations on climate, infection, and contagion; and several of the endemial complaints of the West-Indies* (Spanish-Town, 1781). The piece was also Dancer's effort exonerate himself from claims of his malfeasance and ineptitude in his position as physician to the regiment.
[35] Dancer, *A Brief History,* 19.

atmospheric maladies that infected the troops, Dancer posited. Seasonal changes in the weather could account for the *timing* of when fevers plagued the expedition but not their widespread virulence among the entire battalion.

Dancer's account of why the battalion had suffered such great loss from fevers furnishes a nice example of the increasing attention theorists gave to labor in their analysis and classification of a particular malady. The fevers Dancer witnessed on the expedition attacked the battalion as a whole and were more or less uniform in their behavior. Dancer attributed the expedition's demise during its occupation of the fort in May to specific changes in the weather *and,* significantly, the cumulative effects of the battalion's strenuous engagements prior to their garrison duty. As they trekked from the shore to the fort, the soldiers "were frequently obliged to quit the boats, and unite their most strenuous exertions in getting them along through a number of shallow channels." "Our men," Dancer explained, "were much exposed to injury, from the sun's rays beating violently upon them for seven or eight hours every day, besides a still more intense heat reflected from the many naked shoals, covered with a whitish sand, which rendered the air sometimes intolerable." The "violent isolation during the day," that the soldiers experienced "…was followed by as dangerous an exposition to the heavy dews at night," Dancer explained. Curiously, in spite of these conditions, the soldiers remained healthy.

The men's high spirits enabled them to withstand the onset of illness, in spite of the physical demands of the siege. From February until May, the soldiers ascended the mountain, successfully erected batteries, and attacked the fort. "For some time, the animation excited by prospects of victory and success, enabled our men to resist every impression from the fatigue and labour they underwent," Dancer wrote to explain the

delayed onset of illness. [36] The emotional succors of victory, in other words, temporarily staved off the disastrous effects of a sustained military campaign in the torrid environment on the well-disciplined soldiers' constitutions. In narrating the conditions to which the troops had been subject before the fort's occupation, Dancer implicitly argued that the severity of the epidemic fevers he witnessed during the *occupation* of Fort San Juan in May, rather than its *approach* or its *siege*, could only be explained by the long-term cumulative effects of the battalion's experiences in the months leading up to the fort's garrison. Exposure and arduous labor had an equally if not more deleterious effect than seasonal maladies upon the battalion's health. But the troops' anticipated success generated optimism that, in turn, fortified the soldiers' bodies and enabled them to resist the otherwise detrimental effects of prolonged exposure and perspiration.

The questions Dancer and many other fever theorists excluded in their analyses of different fevers plaguing regiments engaged in land campaigns offer telling insight into the elements of Caribbean warfare that stood out as the greatest determinants of these epidemics. Though this information was available to him, Dancer did not invoke the inexperience of some of the soldiers with the climate of the Caribbean to explain the celerity of the fevers besieging the 1780 troops upon their occupation. The regiments in Dahling's battalion had resided in the West Indies for vastly different periods of time and had thus differed significantly in terms of which regiments had undergone their "seasoning." The battalion was made up of four regiments, including a local and mostly creole Jamaican militia; the Loyal Irish corps; the 60th and 79th regiments, and two companies of British regulars. The 60th regiment had been in Jamaica four years prior to

[36] Dancer, *A Brief History,* 17.

the expedition (since 1776). When he inspected the 60th in the Spanish Town garrison Hunter described the regiment as one that had "been already some time in the island, and might be considered seasoned."[37] The 79th arrived in Jamaica only a year prior to the expedition and had been quartered in Kingston.[38] No records as of yet have been unearthed to provide information about the Jamaica militia or the Loyal Irish Corps, but we can surmise that the Jamaica militia was populated by white creole soldiers who had resided on the island for varying lengths of time. A mishmash of disciplined, seasoned, and unruly regiments recently arrived from the British Isles thus populated Dahling's battalion.

In the San Juan campaign, however, all of the soldiers in Dahling's campaign undertook a protracted siege in the hinterlands of the Mosquito Shore during the months of February-May, irrespective of their seasoning and discipline. In the face of fevers' uniform attack upon the entire battalion in May, explanations that positioned variations in the seasoning of battalion's different regiments did not hold. Dancer attributed the epidemic intermittent fevers prevalent during the battalion's occupation in May to the rigors to which the soldiers had been exposed in the months preceding their residence in the fort. His emphasis on physical exhaustion rather than endemic miasma indicates the growing importance of labor and exposure, in addition to seasoning and discipline, in his assessment of what made some fevers more severe than others. West Indian regiments,

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[37] In fact, the 60th regiment appears to have resided in the island, first in Savannah La Mar and then in Spanish-Town since 1776. The mortality of the 60th regiment, Hunter wrote, owed not to their residence in Spanish Town but from " a detachment of nearly 200 men, who were sent upon the expedition against Fort St. Juan, of whom few or none ever returned." On the 60th regiment's stationing in the Savanna La Mar garrison in 1776 see Robert Jackson, *Treatise on the Fevers of Jamaica, with some observations on the Intermitting Fever of America* (London, 1791), 97-98. On the 60th regiment's residence in the Spanish-Town garrison see Hunter, (1788), 34-35.

[38] Ibid., 37. Again Hunter attributed the abnormally high loss among the 1,008 original soldiers in the year 1780 to the 300 men "sent upon the expedition against Fort St. Juan."

who were easily worn down by the fatigues their campaigns, afterwards became more susceptible to either contagion, endemic miasmatic poisons, or the epidemic maladies of individual seasons, than soldiers engaged in North America or Flanders, where military expeditions were less physically demanding.

The backbreaking work characteristic of sugar cultivation also made field slaves susceptible to epidemic illness and, significantly, identified laboring plantation populations as experimental subjects for those interested in the relationship between toil, enervated constitutions, and the susceptibility of different groups to febrile maladies. For the military physicians, surgeons, and plantation practitioners examining the differential effects of fevers in the West Indies, plantation slaves became a significant population upon which one might test a range of theories.

Chisholm brought years of work as a plantation surgeon and ownership of a cotton plantation to his scholarship on fevers. Chisholm argued that the rank and working lives of fevers' victims determined its intensity and violence. "It is highly probable that the virus of contagion itself was uniformly, the same, only variously modified by peculiar constitutions, habits, and modes of living," Chisholm posited.[39] "Thus among sailors, perhaps, a scorbutic taint, joined to extreme irregularity and imprudence rendered the disease infinitely more fatal than among any other class of men, " he explained.[40] The allocation of different ranks of slaves to distinct tasks in sugar cultivation and similar differences in the work activities undertaken by officers and soldiers offered opportunities to compare the constitutional effects of different types of labor. "About the first of June," Chisholm narrated, "the disease began to appear among the negroes of the

[39] Chisholm (1796), 130.
[40] Ibid., 130.

estates in the neighborhood of town… but our apprehensions," he continued, "were soon found groundless; for the disease did not spread much among them, nor was it marked with the fatality which attended it when it appeared among the whites."[41] The human-made social and spatial landscape particular to islands dominated by sugar-production accounted for Chisholm's easy separation of different ranks of laboring males into discrete test cases.

Grenadian society encouraged Chisholm to connect the degree of contagiousness with which fever affected different social groups to their working lives. "Among field negroes," Chisholm continued in a direct comparison to sailors, "who certainly possess an idiosyncrasy peculiar to themselves and whose mode of living is generally temperate and regular in a remarkable degree, the violence of contagion is so blunted, as to act in the mildest form."[42] Fever did not affect or even spread "very much among them, nor was it marked with the fatality which attended it when it appeared among whites."[43] The periodic outbreaks of contagious fevers among African and Afro-Caribbean slaves on plantations rendered the sugar, coffee, and livestock pens of the British Caribbean a laboratory to examine the cumulative effects of a group's working experiences, in addition to effects of relocation from native environment, in determining a group's susceptibility to fevers and other types of infectious maladies. Even though Dancer, Hunter, and Chisholm disagreed about the remote causes of the fevers they chronicled and their contagiousness, the case studies they invoked of slaves and soldiers reveal the importance they ascribed to labor as a predisposing cause of a fever.

[41] Ibid., 97.
[42] Ibid., 131.
[43] Ibid., 145.

III. Military Camps, Naval Transports, and the Analysis of Remote Causes

Standard medical teaching attributed great importance to discovery of an infectious ailment's environmental origins (remote causes) and its mode of infection. As they studied infectious fevers, medical faculties throughout the Atlantic collected and scrutinized data that they believed would reveal whether the specimens at hand were one of two types. On the one hand, fevers could be miasmatic: caused by natural poisons emanating from the deterioration of vegetable matter, such as that found in dense, humid, and swampy landscapes and, just as often, in the decay of vegetable cargo—often the coffee, pepper, indigo and pimento in a ship's hold. John Hunter, for example, claimed that remote cause of intermittent fevers of Jamaica were miasmatic in origin. The remittent began, Hunter explained, with the poisonous gases, endemic to specific microclimates of the island. In specific regions of Jamaica, he theorized, the atmospheric pressure concentrated the effusions of swamps and marshes into malignant vapors. "The cause of the remittent fever," Hunter proclaimed, "is evidently the exhalations of wet or marshy ground, which may be considered as a poison to the human body."[44] Abrupt or seasonal changes in the weather that brought about an increase in rainfall and temperature intensified the deadliness of miasmatic vapors, whereas the arrival of cool and refreshing breezes, particularly air from the ocean or mountains of high elevation, diminished miasma's concentration and lethality.

The distinction between contagious and miasmatic maladies, standard medical teaching maintained, was that miasmas began in the decay of vegetable matter whereas contagions originated in the decay of a patient's vital fluids. Thus if not miasmatic, fevers

[44] Hunter, 13.

and other infectious diseases were contagious: caused by poisons human or animal in their origin. Contagious maladies, of the most famous in this period was typhus, began in places of dense human confinement with poor air circulation—such as jails, military camps, and ship holds. When significant numbers of human bodies were crammed together in spaces with foul air they internally produced putrid effluvias, which were then disseminated through perspiration and respiration. The effluvias, in turn, infected the surrounding air and contaminated people in the immediate proximity and instigated the deterioration of their body's vital fluids. The deterioration of vital fluids generated contagion—internal poisons. The seeds of these poisons emanated from the sick to infect others. The confinement of patients suffering from contagious fevers in spaces of poor circulation augmented the strength of the contagions they emitted. Human-generated, contagions could also travel across vast distances, for example in the hold of a ship, along with the sick, to contaminate new regions.

The politics of quarantine in the context of late-eighteenth-century commercial relations made the positive identification of the infectious origins of a disease an important geo-political question and added additional classificatory weight to a fever's mode of infection and dissemination. Chisholm, Hunter, Davidson and Dancer were not unique in their interest in this matter. As they had in the past with diseases such as smallpox and plague, medical faculties throughout the Atlantic fixated on the *process* by which fevers and other maladies spread across space and to contaminate different types of matter and used the mode of infection to distinguish different fevers from one another, and thus argue for appropriate disease control measures.

It was a question that produced much vexation and contention among Caribbean practitioners and between these groups and their North American collaborators. "We are confessedly alike ignorant with respect to the matter of infection and contagion," Dancer conceded in a North American periodical in which he defended Colin Chisholm's theory postulating the contagious origins of Caribbean fevers. "But is there any just ground to conclude," he continued, "(although they should sometimes, as it is by many imagined, co-operate) they [infection and contagion] are the same, and that all fevers arise solely from one cause; or that typhus, jail, hospital, ship, and pestilential yellow fever all originate in the same sources as the bilious remittent and intermittent fevers?" West Indian practitioners strenuously differentiated between the human and environmental remote causes of fevers in the region and refused North American's characterization of febrile maladies as ones arising from a singular remote cause. Had the fevers disrupting trade and war in Kingston, Philadelphia, and St. George's been mere gradations of the same disease, "*why should not the phenomena of each be the same*?" Dancer queried his North American readers rhetorically.[45]

Towards the end of the eighteenth century, West Indian practitioners used a fever's mode of infection to taxonomically place it relation to other fevers in systems of classifications and to dispute other practitioners' characterization of the disease. "Dr. Rush," the Jamaican physician William Wright argued, "has classed this disorder [yellow fever] with remittents." Wright disagreed with Rush's classification, although he agreed with Rush that the yellow fever was not contagious and therefore could not be grouped

[45] Thomas Dancer, "Extract of a Letter from Dr. Dancer, Physician in Kingston, Jamaica, to Dr. Coxe, Dated Jan. 30th, 1807," *The Philadelphia Medical Museum, conducted by John Redman Coxe, M.D*, 4 (1808): 92-97.

under the category of remittent. Instead, Wright believed it belonged as a sub-species under Cullen's species of Typhus. "Every one who has practiced in the West Indies," Wright continued, "knows for certain, that remitting fevers of warm countries are not contagious." "From Dr. Rush's book," Wright explained, "and from the numerous letters of my correspondents, there remains not a doubt, in my mind, of the yellow fever being Typhus, exalted to a great degree of virulence from climate, situation, and other adventitious circumstances."[46] "Fevers originate in so many different ways—they differ so much in their mode of attack, in their progress, declension and termination," Dancer concluded his argument, "that I must continue to think they differ in *genera* according to the remote cause."[47] Although Davidson, Chisholm, Dancer, and Hunter confidently grouped the symptoms they observed and opened up bodies to categorize the maladies they studied as either the yellow, intermittent, remittent, or pestilential malignant fevers respectively, it is also clear from their notes and writings that a fever's mode of dissemination, or its remote causes, was increasingly factoring in its identification and their placement of a given fever in relationship to other known febrile maladies.

The intensification of warfare and the slave trade at the end of the eighteenth century made the usually difficult identification of the remote causes a possibility, particularly in Grenada, Martinique, and Jamaica. Anglo-French warfare sent tens of thousands of soldiers to the region between 1780 and 1805. The internment of slaves on particular estates, the frequent arrival of slavers from Africa with enslaved cargoes and

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[46] William Wright, "Practical Observations on the Treatment of acute Diseases; particularly those of the West Indies," *Medical Facts and Observations,* 7 (London: 1782): 1-26, quote p. 6-7.
[47] Thomas Dancer, "Observations on the Contagiousness and Importation of the Yellow Fever. By Thomas Dancer, M.D. of Kingston in the Island of Jamaica. Addressed to the Editors of the Medical Repository," *The Medical Repository of Original Essays and Intelligence, Relative to Physic, Surgery, and Chemistry*, 1 (November 1803-January 1804), 247-254, quote p. 249. Italics in original.

crews suffering from infectious maladies, and the movement and isolation of soldiers to specific camps in mid-to-late eighteenth century Jamaica and Windward Islands laid the groundwork for a scholarship of infectious fevers that attempted to differentiate between the human and miasmatic origins of infection.

One particularly trenchant example of the ways in which military preparations informed research on the miasmatic or contagious origins of fevers is the contradictory views practitioners held about the environment of the Jamaican military garrison known as Up-Park Camp. Practitioners varied widely in their description of Up-Park and the degree to which its low elevation, the swamps and marshes in its proximity, and the breezes from the harbor diminished or invigorated the health of the soldiers quartered there.

Hunter placed Up-Park within the category of unhealthy army barracks, citing its location as a reason for its deleterious effects on soldiers' health. "The quarters at Up-Park," Hunter wrote, "are scarcely more healthy than those at Kingston." Up-Park's barracks were situated a "small distance from the banks of the great basin of water that forms the harbor of Kingston."[48] For Hunter, the differences in the decrease between the 85th and the 92nd regiments illustrated the insalubrious quality of the Up-Park environment and that the remittent fever of Jamaica was miasmatic in origin. Quartered in Spanish Town, the 92nd regiment started off on poor footing. "They were ill supplied with every necessary for their hospital and they were much confined to their quarters." Despite the 92nd's inauspicious start, between the first and second years of their arrival, the number of the regiment's sick diminished, Hunter estimated, from "1-12th to 1-38th."

[48] Hunter, 42, 58.

For Hunter, this dramatic decrease illustrated, in part, the importance of the local environment in producing health. "This is a superior degree of health to that enjoyed by the 85th regiment at Up-Park," Hunter wrote of the 92nd's remarkable recovery. "There may have been other circumstances that contributed to it," Hunter conceded. For one, the 92nd were "sickly when they arrived in Jamaica, owing to their having been so long on the transports."[49] "Yet it no doubt depended principally on the quarters at Spanish Town being more healthy than those at Up-Park, as farther appeared that the number of sick admitted to the hospitals being much greater in the latter, than in the former place," Hunter explained.[50]

The 85th started on much more auspicious conditions footing than their brothers in the 92nd. The 85th "regiment lost few men while on board transports owing to the great attention that was paid to cleanliness." One caveat, Hunter mentioned was that some "arrived sickly and many were scorbutic from being so long at sea."[51] Yet the 85th, which had been adjusting to West Indian climate in the Up-Park barracks, sustained much greater losses than their counterparts in the 92nd who were quartered in the Spanish Town.[52] Between the first and second year of their residence, the proportion of the 85th's losses due to sickness decreased, from 1-2 of the total to 1-3. That is, just barely, especially when compared to salubriousness of the 92nd regiment, who saw a decrease in the ratio of men they lost from 1/12 to 1/38.[53] The difference, "between this and the preceding year, is to be imputed to the regiment being seasoned, to their being lodged in

[49] Ibid., 44.
[50] Ibid., 43-44.
[51] Ibid., 42.
[52] Ibid., 42.
[53] Ibid., 41-42.

good barracks, and to proper provision being made for taking care of the sick, Hunter explained. Hunter accounted for the differences in the number of losses from the two regiments by citing the 85th's exposure to the local environment during its soldiers' prison duties. "A great many prisoners" had been brought to Jamaica at different times by the ships of war." "The prison," Hunter continued, "was at a distance of two miles from the quarters [at Up-Park] from the 85th regiment, and was low as to situation, being close upon the shore." For Hunter it was no accident that " a large proportion of the soldiers [from the 85th] sent on this duty were seized with fevers."[54] The differences in the salubriousness among the 85th and the 92nd also highlighted how different topographies could serve to either discourage or contribute to the rise of miasmatic fevers.

The swamps and low elevations surrounding Up-Park camp illustrated Hunter's contention of the Jamaica remittent as a miasmatic disease, endemic to a particular environment. Setting Hunter's characterizations of the fever and his use of the Up-Park camp to prove its miasmatic origins against Dancer's invocation of the same quarters highlights the malleability of remote causes in the etiologies of Jamaica's fevers.

A startlingly different picture of Up-Park camp emerges from the reports of David Brown, who served in 1800 as the assistant Surgeon to the 60th regiment quartered there. "The fever that has lately raged with such violence in our hospital," Brown surmised, "is *without a doubt contagious.*"[55] Brown based this claim largely on the fact that those attending the sick became infected with the fever. But more importantly, the astounding salubriousness of the Up-Park camp ruled out local miasmas as the remote cause of the

[54] Hunter, 43.
[55] Around 1803 Brown transmitted his notes on the fever patients from the military hospital in Up-Park to Thomas Dancer. Dancer, *Medical Repository,* 1 (1803-04), 254.

disorder. The "situation of Up-Park Camp," Brown wrote, "is as healthy as one as can be well imagined, two miles from the sea, at a considerable elevation, and fully exposed to the strong sea breezes." There were, he continued, "no swamps or other sources of putrefaction in the vicinage." The barracks, moreover, "are not crowded nor filthy. The hospital, which is lately built, is a model for all others, being spacious, well ventilated, and clean, to almost an extreme of nicety." Brown staked his claim that Jamaican yellow fever was human in origin and therefore contagious. "No local cause," he wrote, "existed that could produce the disease."[56] Brown's characterization of Up-Park bore no resemblance to Hunter's depiction and thus shows us the malleability of remote causes.

Merchant and naval vessels cruising the Caribbean, which carried crews and a variety of vegetable commodities, also served as highly malleable spaces of analysis. Just as Hunter had invoked the local environment of Up-Park as the cause of the 85th's fevers, other Caribbean practitioners turned to the cargo of a ship's hold to argue for the miasmatic origin of tropical fevers. Improperly packed cargo could rot in the confined space of a ship's hold and produce the miasmas conducive to yellow fever. In 1794, for example, British privateers sailed into Bridgetown and opened the hold of a captured French East India Man, "in order to break bulk." The practitioner, James Molan of Barbados, described the spread of miasmatic-originating yellow fever from the ship to the port. Molan recounted recoiling in disgust when he opened the ship's hold and "an fetid stench arose, owing to some bags of pepper lying near the pump that had grown putrid." Prior to the unsealing the hold, "the crews and passengers of the French East India prize were "remarkably healthy." Subsequently, however, "every one of the white men who

[56] Dancer, *Medical Repository* 1 (1803-04), 254fn.

were employed in getting out this damaged pepper, were immediately seized with yellow fever and all died." "Some of the blacks who were employed on the same business," Molan reported, "met the same fate." Molan concluded that "this most baneful of all disorders [is] rendered active by opening it; the miasmata then spread its noxious poison." "It is probable, Molan surmised, "that a vessel coming from any hot climate into a port of the United States, apparently in health [among its crew and passengers], may have the disorder bred, and lurking in her hold."[57] Commercial shipping and naval warfare provided additional conditions for practitioners to investigate and contend for the miasmatic origins of infectious fevers.

The peripatetic nature of sailors' work, particularly their movement between contagious ships when they arrived in ports, on the other hand buttressed arguments for the human causes of tropical fevers. The Jamaican botanist and physician to the British Army William Wright scoffed at the claim that "in tropical countries fevers are not contagious." "Whoever has had the care of crowded hospitals, of jails, of ships of war, or of transports full of troops, must have seen numerous and fatal instances of contagion in the West Indies; more especially where cleanliness and free ventilation have been neglected," the Jamaican argued.[58] Though Dancer and Chisholm disagreed about the existence of a species of yellow fever distinctive to the region, both contended that they could trace contagious fevers erupting in towns to movement of sailors who, upon arrival in ports, descended upon the quays of Morant Bay, Kingston, and St. George and thereby

[57] James Molan, September 18, 1797 to Benjamin Rush, Philadelphia in Benjamin Rush Correspondence, Vol 10, p. 70, Rush Family Correspondence, Historical Society of Pennsylvania, Philadelphia, PA (hereafter Rush Correspondence).
[58] William Wright, "Practical Observations on the Treatment of acute Diseases; particularly those of the West Indies," *Medical Facts and Observations,* 7 (London: 1782): 1-26, quote p. 6.

functioned as human vectors of disease. Merchant slave ships functioned as particularly good case studies for Jamaican practitioners arguing for the contagious origins of fevers in part because their itineraries from Liverpool, to the African coast, to Kingston put them in the most notoriously sick ports of the torrid zone.

Disparities in the sanitation and cleanliness of different merchant vessels, moreover, provided the conditions whereby theorists could surmise the contagious origins of fevers. In 1799, Dr. Dick of St. Thomas in the East, Jamaica described the prevalence of the yellow fever in the harbor of Morant Bay. In that year, it prevailed "in a very alarming degree." Dick used the chronology of when the fever appeared on the different vessels docked in port to surmise its contagious origins. The yellow fever had first appeared, Dick wrote, on the *Hercules* of Bristol. The ship's "remarkably clean and neat" state prompted Dick and many others to initially conclude that "the disease could not have *originated* on board that ship." Dick began to wonder whether the Bristol's sailors had inadvertently transmitted the fever from another ship to the *Hercules* and his suspicions were soon confirmed. "It was afterwards found that two of the [Hercules] crew (the first attacked) had been on board another ship, the *Roselle,* lately arrived from Kingston, where she had lost the greatest part of her men to yellow fever."[59] "Observing this," Dick continued, "I recommended to the masters of the other vessels to prevent their men having any communication with the infected ship *Roselle."* Ships outfitted and captained by individuals from London adhered to Dick's recommendations. But for the sailors manning Bristol vessels, the ties of sick friends on board the *Hercules* exerted a greater pull than the injunctions of their captains. "Nothing could prevent," Dick

[59] Thomas Dancer, "Extract of a Letter from Dr. Dick of St. Thomas, in the East to Dr. Dancer, Physician in Kingston, Jamaica," *Philadelphia Medical Museum,* 2.3 (February 3, 1806): 297-299.

lamented, “the crews of those belonging to Bristol from visiting their sick friends on board the *Hercules.*” “The consequence was,” he surmised, “that many of them were attacked by the disease, and fell a sacrifice to their impudence.”[60] The ties of sociability overcame medical orders for these Bristolians. Far too often, sailors manning a particularly clean and healthy ship docked in port and either visited or received from neighboring vessels crews from notoriously filthy and sickly vessels. The subsequent outbreak of fevers among the crew of the healthy ship perfectly illustrated for fever theorists the contagious origins of the disease.

The quarantine of sickly merchant vessels kept many sickly crews on board. Then too, as proponents of contagion theory wrote, quarantine prevented the subsequent transmission of fevers to the residents of the port and its hinterlands. But the all-too-frequent appearance of British press gangs in the harbor prompted both ill and well sailors as well as their captains to thwart quarantine laws and seek refuge ashore. “There being at this time,” Dick wrote, “an impress of seamen, the crews of the merchantmen were obliged, for security, to abandon their ships.” Captain Domett, of the ship *Sir Edward Hamilton* attempted to escape the littoral focus of the press gang by lodging his sailors in the interior of the island upon a large plantation. “Wishing to save his men from the impress,” Domett had sent “some of them to an estate five miles distant from the harbor.” A sailor named Frederick Bech, “who was then recovering from yellow fever,” was among the group seeking asylum in the country. Perhaps Domett also believed that the fever was miasmatic in origin and could not be transmitted through human vectors or that his crew’s residence upon an estate far removed from the miasmas of Port-Morant’s

[60] Ibid., 299.

harbor would eradicate their fevers. Domett's crew spread the fever to the white staff manning the plantation, with disastrous consequences. From Bech, "Mr. McNamara, one of the persons on the estate caught the infection, and died on third day of his illness." The damage extended as well to "Mr. Ness, the manager of the property, and another gentleman, Mr. Slinny," who both "caught the same fever: the former died on the third day, but the latter fortunately recovered."[61] For Dick the outbreak of yellow fever that followed the exodus of sailors suffering from or exposed to infectious fevers from their vessels to the town as well as its hinterlands definitively proved the contagious nature of yellow fever.

The topographically varied military camps, ports, and conditions in ship's holds became the fodder for fever theorists to investigate between the two different remote causes (miasmatic and contagious) of infectious fevers in Jamaica, Grenada, and Martinique. In their work on fevers, Hunter, Chisholm, and Dancer all invoked the confinement and at times, forcible relocation, of different laboring populations to the distinctive regions and microclimates of the West Indies to differentiate between the remote miasmatic and or contagious causes of infection.

IV. Bodies Without Sovereignty: Post-Mortem Dissections, the Desecration of the Dead, and the Search for Proximate Causes

In an 1805 article describing the post-mortem dissection of a yellow fever victim, the physician James Stuart assessed the state of contemporary yellow fever knowledge, and despaired at how little his fellow investigators understood or knew about its internal seat and path. "In no instance is our want of information in pathology," Stuart decried, "to be more lamented than in the disease which gave rise to the dissection before us."

[61] Ibid., 299

Stuart indicted "indolence or want of sufficient leisure," as the factors that had "retarded our investigations," into the proximate cause of yellow fever. Contemporaries' indifference to the utility of post-mortem dissections squandered " a labor of upwards of two thousand years in the study of practice of medicine and left the seats of many of the most cruel and fatal maladies underexplored," Stuart lamented.[62] Dissections did not occur in Antiquity. If Stuart referred to the frequency of dissections in the late medieval and early modern period, he stood on firmer ground. Yet even then, their function, the groups employing them, and the conditions in which they occurred differed sharply from the history Stuart limned.[63] Stuart's narrative fabricated singularity in the analytical use of dissections across history in order to affix the place of eighteenth-century post-mortem dissections of fever victims, as well as the diagnostic and therapeutic insights this investigatory practice engendered, within the pantheon of Western medical achievements. For would-be-elite West Indians practitioners, post-mortem dissections were vital to their analysis of the proximate causes of febrility. Stuart's narrative about the vaunted place of post- dissections in the historical past thus cloaked the practice's temporally and geographically-specific function in the universalizing garb of Western medical progress.

Stuart's broad recapitulation also obscured the function of post-mortem dissections to occupationally differentiate elite practitioners from the healers and

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[62] James Stuart, "Dissection of a Body that Died of the Yellow Fever at Philadelphia in the Autumn of 1805, with practical observations and remarks," *Philadelphia Medical Museum* (1806): 299-310, quote p. 299.

[63] During those eras, Catholic religious very infrequently used post-mortem dissections to settle the canonization inquests. More often, it was desperate medical students and medical professors who unearthed the bodies of condemned criminals, Catholics, and Protestants to educate themselves on the finer points of human anatomy. For histories of unburying the dead and dissecting their bodies see Katharine Park, "The Criminal and the Saintly Body: Autopsy and Dissection in Renaissance Italy," *Renaissance Quarterly,* 47 (1994): 1-33; idem "The Life of the Corpse: Dissection and Division in Late Medieval Europe," *Journal of the History of Medicine and Allied Sciences*, 50 (1995): 111-32, idem. *The Secrets of Women: Gender, Generation, and the Origins of Human Dissection* (Zone Books, 2006).

laypeople with whom they competed for interpretive authority. The latter groups relied primarily on symptoms to identify a disorder and form a prognosis. A cluster of physical signs indicated the patient was ill. Symptoms, most believed, had the potential to outline the contours of a particular disorder, particularly if their appearance was followed and charted over the course of illness. Symptoms were a powerful and popular way to diagnose an ailment because both patients and practitioners drew from the same discursive terrain in describing what had caused a patient's body to malfunction. This language was comprised largely of analogies to known natural objects and material processes, such analogies described the physically external and visible features of different types of illness. For the majority of patients and healers in the Caribbean and the broader Atlantic world, symptoms functioned as a powerful narrative-based diagnostic device, one facilitating the identification of a particular type of illness.[64] Opportunities to view and analyze the results of post-mortem dissections, in contrast, were limited to a select few. Would-be-elite practitioners used post-mortem dissections to augment their understanding of the pathological course of different types of febrility and its treatment. Dissections, in theory, set these medical men apart from the wide majority of practitioners and their patients, groups whose understandings of the nuances of different disorders derived from their personal and historical familiarity with different symptoms

[64] Symptoms, in contrast to non-discursive diagnostic methods such as physical examinations, touch, sweat, and urinalysis, constituted a shared vocabulary patients and their observers used to diagnose illness. For examples of non-discursive methods that included the analysis of sweat, urine, and bumps see E.T. Renbourne, "The Natural History of Insensible Perspiration: A Forgotten Doctrine of Health and Disease," *Medical History* 4 (1960): 135-152; idem, "The History of Sweat and the Sweat Rash from Earliest Times to the end of the 18th Century," *Journal of the History of Medicine and Allied Sciences,* 14 (1959): 202-227; Michael Stolberg, "Sweat. Learned Concepts and Popular Perceptions, 1500-1800," in *Blood, Sweat, and Tears: The Changing Concepts of Physiology from Antiquity into Early Modern Medicine* (2012), pp. 503-522; idem, *Uroscopy in Early Modern Britain* (Ashgate: Farnham and Burlington, 2015); Olivia Weisser, "Boils, Pushes and Wheals: Reading Bumps on the Body in Early Modern England", *Social History of Medicine* 22 (2009): 321-339.

and their chronological appearance, not with the inside of dead bodies. Stuart's imagined past thus also disclosed the aspirational value of post-mortem dissections for the many aspiring West Indian physicians as well as surgeons, whose eagerness to distinguish their abilities from the rest of the medical hoy polloi matched their desire to open up the cadavers of their patients.

Intellectual arguments for the interpretive significance of post-mortem dissections claimed that a reliance on symptoms alone would lead a practitioner down a potentially fatal diagnostic dead-end. Symptoms, the occupationally-climbing practitioners working in the West Indies argued, sketched a disorder's external manifestations. Post-mortem dissections, in contrast, allowed one to identify the internal origins of an ailment. "In the subjects who died of this disorder, the liver was increased in bulk and greatly inflamed: on the concave part large black spots appeared, which were mortified parts of that *viscus*," the Jamaican physician John Williams explained.[65] For Williams, the liver's appearance proved his claim that "the blood's circulation is obstructed in the liver," and that fever began in the corruption of this particular organ. [66] The graphic stories of organ destruction visually narrated in the slow and careful opening up of a fever cadaver, in other words, indicated the specific organs in which a fever had originated. In revealing a disease's proximate (pathological) causes, post-mortem dissections functioned as the

[65] Dissections also facilitated the observation of fevers as they had progressed in individual patients and disturbed specific bodily systems at different moments in time. Dissections, in this view, facilitated practitioners' comprehension and their identification of different species of fever chronologically—that is as it passed through the its distinctive stages. "The bile will be subject to alterations similar to those which happen in all other fluids and may verge towards putrefaction," Dancer explained. "But this is not," he continued, "observable in the incipient state of the disease: it is only in the progress of it, and when a general putrescence comes to prevail." See Dancer, *A Brief History,* 39.

[66] John Williams, "An Essay on the Bilious or Yellow Fever of Jamaica," in John Williams and Parker Bennet, *Essays on the Bilious Fever: Containing the Different Opinions of those Eminent Physicians John Williams and Parker Bennet, of Jamaica: which was the cause of a duel and terminated in the death of both* (Jamaica: 1751), 12.

lynchpin in a system of disease classification and diagnosis that employed a malady's multi-factoral origins to explain its behavior, prognosis, as well as its similarity to known disease entities. For would-be-medical elites eager to gain a foothold over ordinary practitioners and laypeople, the enormous analytical value in post-mortem dissections lay in their potential to reveal the *truth* or the pathological origins of a disease, that had, while the patient was living, manifested imperfectly in a cluster of symptoms. Post-mortem dissections held out to would-be-elite practitioners the promise of being able to characterize an outbreak of fever correctly.

For Thomas Dancer, dissections issued a powerful reprimand to those who used the appearance of symptoms and symptoms alone to hold forth on the finer points of how a fever had progressed in the body of a patient. The black and brown color of many yellow fever patients' vomit, Dancer warned, should not be taken as an indication that bile had caused yellow fever. Dancer was one of several practitioners who invoked the superior autoptics of dissections to rebuke the classification of yellow fever as bilious, based only on observation of the patient's symptoms. "All the writers who have treated that species of putrid remittent, called the yellow fever have assigned for the cause of it a corrupted putrid bile absorbed into the system," Dancer wrote, dismissing this argument. The dissections Dancer witnessed proved that bile was not absorbed into the system in cases of yellow fever because in the cadavers of fever patients there was "never shown any obstruction of the gall-duct." "How then," he queried rhetorically, "should bile be more than usual absorbed?"[67] Dissections provided Dancer with an organ-based evidentiary rebuttal to the widely-held belief, which was based on the frequent symptom

[67] Thomas Dancer, *A Brief* History, 38-39.

of black vomit, that the excessive production and absorption of bile was the primary cause of yellow fever.

Post-mortem dissections had the added pragmatic value for practitioners in the West Indies operating in a competitive and diverse medical marketplace: on the basis of the diagnostic specificity dissections enabled, they became a way for elite practitioners to advance their therapeutic authority on fevers and to assert their superior methods of treatment over laypeople, patients, and other non-dissecting healers. In observing the pathological origins of fevers, witnesses to post-mortem dissections were, these groups argued, better equipped than those who relied on symptoms and other forms of non-pathological diagnosis to identify a particular type of fever and to prescribe a *specific* cure that could stop febrility immediately. "The utility and advantages of dissections to the establishment of rational indications in the cure of disease have been so generally and justly admitted from the very earliest ages of medicine that it would be at least, unnecessary, if not intrusive to insist upon them in the present," Stuart opened his invective against his non-dissecting competitors.[68] The knowledge gained from this practice emboldened would-be-elite practitioners to elevate their therapeutic authority above the knowledge and cures offered by other types of healers working in the Caribbean.

Historically, prescriptions for different regimens and medicines in the cure of fever in the West Indies hinged on the determination of a fever's proximate origin and the subsequent type of disease process this produced. The question of whether the various

[68] James Stuart, "Dissection of a Body that Died of the Yellow Fever at Philadelphia in the Autumn of 1805, with practical observations and remarks," *Philadelphia Medical Museum,* 2 (1806): 299-310, quote p. 300.

remittent and intermittent fevers encountered in the region were bilious or inflammatory had, for nearly half a century, divided the self-constituted medical faculty in the British West Indies. Those who maintained that remittents created an inflammatory disease process pointed to distensions in the circulatory system and symptoms, such as headaches and insensibility, that indicated swelling in the vessels of the brain and the concurrent inflammatory disease process. The practitioners who indicted the excessive production and absorption of bile in the digestive system as the chief proximate cause of fevers, in contrast, pointed to frequent vomiting and pallid color of the skin as external signs of the disruptions to the organs of the digestive system the fever had enacted internally. In opening up dead bodies, practitioners maintained they had resolved this dispute between the inflammatory or bilious nature of the fever under study. Regardless of the conclusions different parties drew, these disputes emboldened practitioners to open up bodies in support of their claims and thus cemented the role of dissections as a definitive investigatory practice, one that might be used to pursue if not settle questions about the pathological origins of different disease processes.

Whatever else post-mortem dissections meant to practitioners in other parts of the Anglophone world, in the midst of the global yellow fever pandemic of 1793-96, they gave a group of would-be-fever experts in Kingston, Jamaica a chance to definitively establish the bilious origins of yellow fever and to cement their expertise in the prognosis and treatment of the disease over their chief antagonist, the surgeon-physician David Grant. Grant's inability to access cadavers for post-mortem dissections, as the dispute illustrates, became a major liability for the credibility of his interpretation of the fever's identity, though he marshalled other forms of evidence, including fever texts written by

West Indian medical men, first-hand observations, and numerous patient case studies. Still, as Grant battled it out with the members of Kingston's Humane Society between May and September of 1794, in a series of essays that appeared in Kingston's newspaper, *The Royal Gazette*, his lack of access to fever cadavers hindered his ability to concretize the fever of 1794 as an inflammatory disorder.[69]

While the analysis of other internally-produced liquids, such as blood, urine, and sweat traditionally sufficed in the absence of a dissection, even Grant's analysis of his patients' blood did little to support his claims. The printed conflict over the cure of yellow fever began with the May 1794 publication of David Grant's essay, "Hints to the Surgeons of Ships," in which Grant argued for the inflammatory character of the fever and advocated venesection as the safest mode of cure. Grant used his observations of patients' symptoms and the properties of their blood as the basis for his classification. Surgeons need only observe the "profuse hemorrhages from the nose and stomach," as well as the "fullness of the blood vessels of the head and stomach," to comprehend that the disease originated in the head. [70] The successful treatment of the fever "depends upon early blood-letting, and emptying the stomach and bowels as speedily as possible," using purgative medicines. Grant acknowledged that the blood of yellow fever patients often

[69] Dispute over the classification and cure of yellow fever played out in fourteen different accusatory articles and essays and appeared in print in the *Royal Gazette.* See the following articles and essays appearing in the *Royal Gazette* (Kingston: Printed by Alexander Aikman, Jr.): David Grant, "Hints to Surgeons of Ships," May 3, 1794; "Report of the Committee on Yellow Fever," July 26, 1794; David Grant, "Strictures on the Report of the Medical Meeting at the Public Hospital," July 30, 1794; James Walker's response to David Grant, August 2, 1794; John Harris' response to David Grant, August 2, 1794; David Grant's response to James Walker and John Harris, August 8, 1794; Article published under the pseudonym "medicus," August 8, 1794; Committee on Yellow Fever, "Reply to Dr. Grant's Strictures on the Report of the Medical Meeting at the Public Hospital," August 8, 1794; James Walker's essay, August 16, 1794; John Harris' essay, August 16, 1794; David Grant's essay, August 23, 1794; Arthur Broughton's essay, August 23, 1794; James Shaw's essay, August 23, 1794; republication of Grant's "Hints to Surgeons of Ships," August 30, 1794.

[70] David Grant, "Hints to Surgeons of Ships," *Royal Gazette* May 3, 1794.

belied the classification of the disease as an inflammatory fever because of the inconsistency in the blood's appearance: "in one patient it is somewhat fizzy, in a second nothing of the kind is to be seen but of a sufficient tenacity, and it is oftentimes of a looser texture in a third," he admitted. The "over distention of the vessels of the head and stomach, " however, made "the evacuating of the stomach and bowels of their acid contents," necessary.[71] Staving off death from yellow fever, Grant explained, required copious and continual bleeding.

To support his interpretation, Grant invoked the insights and observations of the physicians Benjamin Rush of Philadelphia, John Lining and Lionel Chalmers of South Carolina, and William Hillary of Barbados, whom, he argued, had made similar observations of yellow fever in other periods and sites. These authors depicted the success that the prompt use of venesection had engendered in curing yellow fever patients and their triumphant narratives tacitly endorsed Grant's contention of yellow fever as an inflammatory malady and its treatment through blood-letting. Grant supplemented the insights of these authors with his own experiences, adding in as well case studies and statistics that his friends, resident in Jamaica's various ports and whom had treated sailors who had been struck down by fever, transmitted to him. Collectively their writings supported Grant's claim that "the seat of this fever, is in the head." Because, Grant explained, "the liver is no way concerned... blood letting, at an early period, in as large a quantity as the exigency of the case may require, is the most speedy, safe, and certain method of cure." Additionally, by dint of comparison, Grant's references to the practices of past and contemporary medical notables outside of Kingston served up

[71] David Grant, *Royal Gazette* August 8-15, 1794.

in print a harsh critique of the Committee's endorsement of calomel, rather than bloodletting, as their method of cure.[72] Yet the varied types of physical and printed evidence Grant marshaled in support of his claims did not hold up against the information revealed in the post-mortem dissections that the Committee subsequently conducted. In fact, Grant's inability to peer inside the bodies of fever victims directed him to prescribe remedies at odds with those issuing from his rivals in Kingston.

In response to Grant's attacks and unwelcome recommendations, the office-holders of the Kingston Humane Society, a group originally formed for "the resuscitation of the apparently drowned," formed the Committee on Yellow Fever. [73] They first invited the "medical gentlemen," of the port to bring case studies of patients afflicted with yellow fever, "that upon a comparative view, we might be enabled to regulate our future practice in this disease."[74] At the next meeting, "sixteen gentlemen" appeared, "numbers of cases were produced, and judicious remarks [were] made by the members." Collecting manuscript materials in order to relate different manifestations of the disease to either patients' status as newcomers to the region or their exposure to noxious miasma, the Society positioned itself as a vital node in Jamaica for theorizing the fever's etiology. Shortly after their first meetings, James Walker, the Society's secretary, used his

[72] David Grant, *Royal Gazette* May 3-10, 1794.
[73] For more on The Humane Society of Jamaica's parent organization, the Royal Humane Society of London see Luke Davidson, "Raising up Humanity: A Cultural History of Resuscitation and the Royal Humane Society of London," (Ph.D. Dissertation, University of York, 2001). On the relationship between The Royal Humane Society of London and its numerous colonial branches see Amanda Moniz, "'Labours in the Cause of Humanity in Every Part of the Globe': Transatlantic Philanthropic Collaboration and the Cosmopolitan Ideal," (Ph.D. Dissertation, University of Michigan, 2008), 239-287. For a description of the Kingston Medical Society and the Committee on Yellow Fever, which grew out of the Jamaica Humane Society, "in consequence of a malignant fever which raged in 1793 and 1794 and baffled the power of Medicine for many months," see the description of its activities and members in *The Jamaica Almanack and Register calculated to the Meridian of the Island for the year of our lord 1796* (Kingston, Printed by David Dickinson for Thomas Stevenson, 1797), 5.
[74] James Walker, *Royal Gazette* August 2-9, 1794.

appointment as physician to the public hospital in Kingston to get the Society's members access to yellow-fever patients on a large scale. Although the Yellow Fever Committee initially met at Watson's tavern, the members quickly found it difficult to hear one another over the raucous din. Walker then "took the liberty of requesting the meetings to be held at the public hospital." The physician invited "every gentlemen to examine the cases there, to visit the wards, and to give their sentiments upon occurrences." On the basis of these activities the Society's officers argued, with great credibility, that their work substantially advanced the body of medical knowledge in the region. The Committee on Yellow Fever soon attracted attention and membership from subscriptions from prominent medical men in London, Philadelphia, and New York, who became corresponding members.[75]

The members of the Committee moved quickly to discredit what they viewed as the weak evidentiary basis of Grant's therapeutic claims and the unstable ground on which Grant pitched his analysis of the disease.[76] Any practitioner could cherry-pick quotations from the pantheon of fever experts to support their individual claims James Walker contended. And, moreover, it was dangerous to transplant the methods of Rush, who practiced in Philadelphia, to the climate of Jamaica. For good reason it seemed. In a

[75] See list the Kingston Medical Society's list of corresponding members in "Kingston," in *The Jamaica Almanack and Register calculated to the Meridian of the Island for the year of our lord 1796* (Kingston, Printed by David Dickinson for Thomas Stevenson, stationer, 1797), np; "Kingston," *The New Jamaica Almanack and Register for the year of our lord 1800* (Kingston, printed by Stevenson and Aikman, 1800), np.

[76] The Committee's critique that Grant misappropriated the theories of past and contemporary fever theorists from other parts of the Atlantic world no doubt had much resonance with contemporary readers. While it was common among essayists debating yellow fever to invoke printed fever authorities to substantiate general observations about the behavior of the disease it was also widely contended that the character of yellow fever, as well as its mode of infection and treatment, changed from year to year and place to place. Thus printed fever authorities made recommendations drawn from their experiences with the fever in a specific time and place and should be consulted as for general guidance rather than to substantiate particular therapeutic or classificatory claims.

medical periodical published a decade prior to the Grant-Committee dispute, the Jamaican physician William Wright reported the sad case of "some young men, who were seized with the yellow fever and blooded on the day of the attack" and "died in a few hours after." "In Jamaica," he continued, "the lancet is now laid aside in the treatment of this disease." "The American practice," Wright concluded, "therefore will not succeed in the West Indies."[77] In 1794 Wright's 1782 pronouncement was still in effect, at least among some practitioners in Kingston. "However respectable Dr. Rush's name is in science," John Harris, secretary of the Humane Society expounded, Rush made his recommendations for "a different disease in a far different climate," and the Philadelphian's observations did not apply to the fever Jamaica combated in 1794.[78] For the Jamaican faculty who populated the Committee, the only way to really know the fever of 1794 was through correlation of patients' symptoms with observations derived from post-mortem dissection of the diseases' victims. Had Grant observed the dissection conducted by the Committee, James Walker quipped, "it would have assisted his demonstration better than culling from Dr. Hillary what he can find applicable to his purpose." Indeed, Grant's failure to view the dissection of a yellow fever cadaver remained a liability. "How many bodies has he inspected, to enable him to demonstrate the seat of this disorder? I venture to answer, none," James Walker sniped in August of 1794.[79]

The Committee on Yellow Fever monopolized the authority to determine the identity and essential characteristics of yellow fever in Jamaica because its members

[77] William Wright, "Practical Observations on the Treatment of acute Diseases; particularly those of the West Indies," *Medical Facts and Observations,* 7 (London: 1782): 1-26, quote p. 10-11.
[78] John Harris, *Royal Gazette*, August 8-15, 1794.
[79] James Walker, *Royal Gazette*, August 16-23, 1794.

commandeered the resources necessary to pathologically investigate the handful of the island's fever cases that fell within their grasp. James Walker, acquired corpses from patients who had died in the hospital. Between June and August of 1794, the Society opened up seven yellow fever cadavers in an effort to conclusively prove the bilious nature of the disease. Aiming to refute Grant's claim that the disease had its seat in the brain, the Committee focused its first dissection and its subsequent analysis on the vessels in the cadaver's head. An "athletic, middle-aged man," constituted the first experimental subject. Laid before the gaze of the physicians and students at the public hospital, "nothing appeared in the head to create a supposition of fullness or inflammation." The man's digestive organs as well as those of an additional five cadavers told a story about yellow fever's progress through the body that was very different from the one promulgated by Grant. "Upon opening the stomach, it was found to contain a considerable quantity of the same black bilious liquor which is generally discharged in great quantities by vomiting," Walker narrated.[80] As Walker opened the stomach, liver, and gallbladder for the group's inspection, individual members acquired the visual proof that the fever originated in the digestive organs and was a bilious rather than an inflammatory malady. On that basis, the Committee formulated therapeutic treatments. The "variety of cases presented to the Committee" showed that "the most successful practice has flowed from the exhibition of calomel [mercury chloride].... premised by a purgative."[81] The dispute between Grant and the Committee on the nature of Yellow Fevers testify to the capacity of dissections to stimulate debate over the specific pathological process of fevers in the torrid zone and their attendant mode of treatment.

[80] James Walker, *Royal Gazette*, August 8-15, 1794.
[81] Report of the Committee on Yellow Fever, *Royal Gazette* July 26-August 2, 1794.

Practitioners in the island with no stake in the dispute between the Committee and Grant also leveraged the intellectual profits of post-mortem dissections. These individuals opened up dead bodies to resolve disputes arising from the different weight given to the predisposing and remote causes of fevers in determining a fever's cause. "The probable issue of the disease," as Stuart had written, "may be presaged from knowledge of its source." On these grounds, the Jamaican physician John Hunter invoked the mass dissections of fever cadavers in the wake of the 1741 British invasion of Cartagena. Hunter used these dissections because he wanted to cement, once and for all, his argument that the fever of Jamaica was miasmatic in its origin.[82] Hunter mixed observations on the symptoms of poison and fever victims with the pathological analysis of the organs of fever patients. This comparison helped Hunter prove the similarity between the Jamaica remittent and other types of poisons. "Sickness and vomiting are the first effects of most poisons, animal as well as vegetable, and also of morbid poisons, and are likewise common at the commencement of fevers," he explained. His post-mortem investigations buttressed his claim that the remittent fever affected its victims' internal organs in the same way that poisons did. Unfortunately, Hunter lacked observations on the organs of poison victims, which is why he had to rely on the symptoms of poisoned patients. "I know not of any instance of the body having been examined after death, occasioned by the bite of a serpent." In the absences of comparative evidence, Hunter combined a miscellany of observations drawn from dissections on fever victims and symptoms observed in poisoned patients. This imperfect comparison allowed him to advance the claim that the miasmatic poisons causing the Jamaica remittent and the other

[82] James Stuart, "Dissection of a Body that Died of the Yellow Fever at Philadelphia in the Autumn of 1805, with practical observations and remarks," 302.

well-known animal and vegetable poisons were one and the same, as evidenced by the fact that both disorders manifested in the same symptoms and produced similar internal processes of decay.[83]

Hunter's most powerful argument in this section was his recapitulation of the distressed state of the digestive organs in soldiers who had perished from fevers in the region. Hunter called up specifically the processes of putrefaction observed amongst the soldiers and sailors who had sickened and died from fevers during the 1741 British invasion of Cartagena. It is startling to read Hunter report on the numerous dissections (twenty-one in total) performed on the soldiers who died in the invasion of Cartagena in 1741 because scholarship on the invasion does not mention the large number of dissections took place during and after the failed campaign. Hunter used reports on these dissections to highlight the diseased state of the victims' digestive organs.[84] Next, Hunter set these pathological observations drawn from fever victims alongside more familiar symptoms caused by the "operations of poisons." These included "sickness and vomiting." Additionally, "the blood comes to be in a dissolved state from many poisons, as that of a viper," Hunter noted. "The same poison," he continued, "is known to produce jaundice, preceded by a great loss of strength and sometimes fainting fits." These symptoms observed in poisoned patients mirrored "several of the symptoms of the worst kind of remittent fever, particularly the jaundice."[85] Though he lacked post-mortem dissections of poison victims, their absence did not stymy Hunter's claims, he only needed fever cadavers. By using *symptoms* observed in poison victims, Hunter

[83] Hunter, 150.
[84] Ibid.,163.
[85] Ibid., 157.

confidently stretched the analogy between the two disorders. For Hunter, the similarities observed in the state of blood of poison victims with the observed absorption of bile in the blood of fever cadavers told the same pathological story, one of putrefaction and dissolution of blood.[86] The similarities in the two types of illness proved for Hunter that the remote causes of the Jamaica remittent fever lay in the island's miasmatic poisons. The post-mortem dissections of fever cadavers were thus a crucial lynchpin in Hunter's argument for the similarities, in their effects on humans, of the remote causes of fevers (the miasmatic vapors emanating from Jamaica's swamps), and the animal and vegetable poisons documented throughout history.

The real and associated links between post-mortem dissections, criminality, and spiritual retribution in the everyday world of early modern Britons inhibited the supply of cadavers outside of the West Indies. Most early modern Europeans and colonists encountered post-mortem dissections as spectators in an urban-based penal culture where other types of mortuary dismemberment, such as decapitations, were employed by the English and then the British state to desecrate the bodies of the convicted and terrify onlookers.[87] Many Britons as well as British colonists and North Americans thus held a longstanding historical association with post-mortem dissections, spiritual desecration, and criminality: they related it to forms of dismemberment, such as decapitation, that symbolically denied criminals the possibility of eternal salvation by preventing the reunification of the principal parts of the criminal's body in the grave.[88] The demographic

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[86] Hunter, 163.

[87] E.P. Thompson in Douglas Hay, ed. *Albion's Fatal Tree: Crime and Society in Eighteenth-Century England* (Verso, Second Edition, 2011); Peter Linebaugh, *The London Hanged: Crime and Civil Society in the Eighteenth Century* (London: Verso, 2006).

[88] By 1760, in the British Isles, it was considered barbarous to place the heads of rebels and criminals on public display on gateways. (After 1760, the executioner might cut off the head of the criminal, but it would quickly thereafter join the criminal's body in the coffin). On the evolution of ideas about the

circumstances of various settlements in the British Isles also inhibited practitioners from seizing the deceased of all ranks for post-mortem medical investigation. In the majority of the urban centers outside London, relatives of the dead in these regions, or parish members, or rectors took custody of and managed the bodies of the dead, ensuring that they ended up in the church ground rather than on a hospital examining table. Practitioners throughout the Atlantic fantasized about the intellectual bounty dissections would yield, but the circumstances enabling their implementation on a large scale were limited to certain regions.

The bodies of the white, African, and Afro-Caribbean poor largely constituted groups fever analysts were able to obtain for dissections.[89] While the sources of fever theorists' cadavers are often murky, it is not difficult to speculate with some accuracy which rank of people became their experimental subjects. The pauperization of merchant and Royal Naval crews produced many unclaimed yellow fever corpses in the public hospitals of ports around the Atlantic world. The social upheavals and the human catastrophe set off by the Atlantic slave trade, large-scale plantation agriculture, and Anglo-French conflict in the late-eighteenth century Caribbean created a trickle of unclaimed corpses, enabling post-mortem dissections in significant numbers for the Anglo-Atlantic world.[90] The other British West Indian fever theorists opening up bodies also alluded to poor and middling whites as the fever victims who became their cadavers.

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treatment of dead criminals see Frank McLynn, *Crime and Punishment in Eighteenth-Century England* (Routledge: London, 2002), 272-4.

[90] Dissections became much more common in the early nineteenth century see Helen MacDonald, *Human Remains: Dissection and its Histories* (New Haven: Yale University Press, 2005); Russell C. Maulitz, *Morbid Appearances: The Anatomy of Pathology in the Early Nineteenth Century* (Cambridge: Cambridge University Press, 1987); Ruth Richardson, *Death, Dissection, and the Destitute* (Chicago: University of Chicago Press, 2000).

In the British Isles the corpses of middling and laboring people were preserved from the spiritual and constitutional violations associated with post-mortem analysis. This was not the case for laboring poor whites in the Caribbean where geographic distance from family, kin, and community norms who would enforce adherence to traditional mortuary practices were not present. The compromised power of African and Afro-Caribbean slaves also made them, in the West Indies, vulnerable to the mortuary predations of practitioners eager to use dead bodies to study the seat of disease.

The assumption that both poor whites and enslaved Africans could, upon death, become fodder for post-mortem medical investigation is visible in plantation surgeons' writing on the more pedestrian and uncontroversial disorders of the Caribbean. In addition to fever analysts, surgeons dissected their patients with increasing regularity towards the end of the century and wrote about their findings in short printed pamphlets and articles in medical periodicals. In 1790, for example, the Dominican surgeon James Clark published fourteen case studies on his successful surgical treatment of hepatitis. Clark composed his studies with an eye towards encouraging "young practitioners of physic and surgery in warm climates to open abscesses in the liver, when they point outwardly," and he argued for the necessity of hasty surgical incisions in these cases.[91] Clark bragged that he had "upwards of 100 cases of hepatitis which have fallen under my care," all of which Clark treated surgically.[92] Of the four case studies documenting patients who had died under his care, three described what Clark had seen in his post-mortem dissections, which he performed upon two slaves and one poor white carpenter.

[91] James Clark, "Histories of Cases of Abscesses in the Liver: with Observations on the Effects of Opening them," *Medical Commentaries for the Year MDCCLXXXIX by Andrew Duncan*, 4 (1790): 317.
[92] Clark, "Histories of Cases of Abscesses in the Liver," 351.

Post-mortem dissections played a leading role in Clark's explanations of some of his patients' failure to make a full recovery, and the surgeon discussed his post-mortem findings to countermand arguments about the dangers of his surgical practice.

What stands out in Clark's discussion and those of other surgeons engaged in the analysis of more prosaic disorders is they did not foreground at the start of their writings the intellectual triumphs that post-mortem analysis would bring. Instead, they quietly subsumed their analysis of post-mortem remains in case studies that shored up their original diagnosis and mode of treatment. Clark's silence stands in stark contrast, for example, to the triumphant bellowing of the yellow fever analyst James Stuart, who, in a lengthy preamble to his article on yellow fever, invoked the authority of classical antiquity to justify cutting into a single yellow fever cadaver and to suggest the historical significance of his dissection. The nonchalant discussions of the post-mortem investigations that appear in the texts of surgeons and those not studying yellow fever suggests the license that, in the West Indies, practitioners of varying ranks and education maintained to open up the bodies of their poor and enslaved patients.

Clark's dissections were purposeful and pragmatic. In selectively dissecting specific types of patients, Clark documented, with pathological evidence, the extenuating circumstances that had inhibited these patients from making a full recovery, in spite of his incisions. In cases where his patients had died after he had made his surgical incisions, Clark opened up their bodies to exonerate himself from wrongdoing. The majority of Clark's enslaved patients died, the surgeon argued, because for one reason or another, too much time had passed between the growth of their abscesses and the surgeon's removal of them. Clark's analysis of these three patients' post-mortem

condition made the case that they had died in spite of and not because of his surgical interventions.

The bodies of deceased slaves allowed Clark to exonerate his own actions in hastening their death because he could blame the poor medical care slaves received from the hands of others prior to his medical treatment of them. "The failure of success in these few (except in the first and fourth cases)," he explained, "was owing to the operation having been too long delayed."[93] Clark's dissections played a key role in this first type of explanation. In the fall of 1782, "a negro named Symon, the property of Mons. Jacquin, planter, aged about 25 was brought to me," the surgeon narrated. This was not the first time, however, that Clark had attempted to treat Symon. Symon "had been long ill, and was shewn to me a month before the same complaint." During Symon's and Clark's first encounter, Clark "advised opening of an abscess in the right lobe of his liver, which pointed outwardly between the third and fourth ribs."[94] Either Symon or Jacquin, or perhaps both, did not agree with Clark's advice.[95] Shortly after Symon's initial meeting with Clark, "his master indulged him to go to the country, and be treated by one of his own countrymen (famous among the negroes for curing disorders of a doubtful nature, and for removing witchcraft, in which they believe) called there an Obiah man."[96] A month later, Symon came under Clark's scrutiny again, now much worse for the wear. "When he returned to town, the abscess was increased to its utmost

[93] Clark, "Histories of Cases of Abscesses in the Liver," 317.
[94] Ibid., 334.
[95] And understandably so. By Clark's own admission, the operation was new to the island; Clark had performed the procedure only two years prior, and then under the watchful eye of Dr. Robert, "an old practitioner." The hesitation of Symon and Jacquin was familiar to Clark, a hesitation, he surmised that was "owing, most probably, to the horror which the idea of being cut into occasions." Clark, "Histories of Cases of Abscesses in the Live," 318.
[96] Clark, "Histories of Cases of Abscesses in the Liver," 334.

extent and I expected it would bust every moment," Clark explained. And he also had a septic fever. "I despaired of success," a worried Clark wrote. "And," he continued, "would not have opened it, had not the negro as well as his maser solicited me very earnestly to do it."[97] In Clark's memory, his reputation and the slave's life hinged on the success of this operation. Despite Symon's weakened condition, both Jacquin and Symon begged Clark to proceed.[98] Clark proceeded but Symon died three weeks after the operation. Clark subsequently dissected Symon, and found "that the whole substance of the lobe had been consumed before it was opened." "If this abscess had been opened when it was first proposed," Clark concluded "there is, I think little doubt that this patient would have recovered, as he had a good constitution and was remarkably stout."[99] In explaining why Symon's case had gotten past the point of intervention, Clark indicted both the overseer's permissiveness and backwards African spiritual practices, and used the post-mortem inspection of Symon to support this claim.

Clark's indictments of slaveowners often betrayed the surgeon's pecuniary ambitions; Clark's post-mortem findings did not advance the knowledge about the cure of hepatitis beyond what his case studies had already conveyed. Instead his remarks often pointed an accusatory finger at the penny-pinching planters who, Clark implied, attributed their slaves' deaths to "other diseases" so that they could forgo contracting with the Dominican surgeon for his services. The swollen and distended livers he discovered upon unsealing the bodies of deceased slaves confirmed Clark's suspicions.

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[97] Ibid., 335.
[98] Symon and his master, Clark rationalized, were inspired, "from their hearing of my late success," and urged the surgeon to operate in spite of Symon's frail condition and the death of Clark's first patient. After the death of Clark's first patient, when Clark found it difficult to "obtain the consent of any more," many other patients "died of the abscess bursting, rather than consent to it." Ibid., 335.
[99] Ibid., 336.

"On dissection it was found, that," Clark reported, "many negroes had died of abscess in the liver, whose death" Clark reported, "was attributed by their masters to other diseases." [100] Clark's reference to the unexceptional cases of slaves who had died from abscesses convicted slaveowners and their failure to act on their slaves' behalf. Clark's open critique of the planters made even more visible the casualness with which the bodies of dead slaves were available for the surgeon.

Clark attributed the deaths in the second group of patients to their unwillingness to undergo surgeries to relieve their swellings. Some of the patients in this group were elite white planters, and Clark noted the efforts he made to obtain their bodies in order to show that their deaths had resulted from their reluctance rather than his surgical interventions. Yet prescriptions against opening up the bodies of elites impeded Clark's efforts. For example, in 1786, " MR. M_____, planter, aged 48 years, applied to [Clark] for advice, having a swelling at his right side, not far from the pit of his stomach," Clark reported. He "suspected that a suppuration had already begun," but in prudence, the surgeon prescribed " a course of mercurial frictions."[101] About a week later, Mr. M's tumor was much worse and Clark applied a poultice over it, advising Mr. M to come into town and have the abscess opened. Mr. M "seemed very averse," to what Clark proposed and didn't come back to Clark for three weeks.[102] When he did seek Clark's assistance again, Mr. M was "now much emaciated by a hectic fever and diarrhea; and the tumor was greatly increased in size." He staggered into Clark's home, and the surgeon opened Mr. M's tumor, which "discharged an incredible quantity of very foetid purulent matter."

[100] Clark, "Histories of Cases of Abscesses in the Liver," 346.
[101] Ibid., 340.
[102] Ibid., 341.

"On examining the abscess with my finger and a long probe," Clark reported, "I found the whole substance of the lobe apparently consumed, and therefore despaired of his recovery." Mr. M's condition worsened and on the sixth day following his surgery, he died.[103] "Had this patient consented to my opening the tumor a few weeks sooner," Clark wagged his finger at his deceased patient, "he in all probability would have recovered, although his constitution had been much injured by his long residence in a warm climate." Although he had planned on dissecting Mr. M to show that Clark's surgery had not caused the planter's death, Clark unfortunately could not secure the planter's body. "I had not an opportunity of opening the body after death," Clark wrote. Clark instead invoked his second-best set of evidence: what he what had observed of the tumor while the patient had lived. The difficulties Clark encountered obtaining white elite cadavers for post-mortem inspection contrast with the ease with which he dissected enslaved patients, another group of patients whose deaths he also attributed disorders that had set in after and independent of his surgeries.

The cadavers of poor whites and slaves were the evidence Clark used to absolve himself of medical error. To explain how patients could die from ailments subsequent to his surgical operations, Clark invoked his dissection of, "a negro, named Fig, aged about 20 years." Fig's case was ideal for Clark because nearly six months elapsed between Clark's surgery and Fig's death, a timeline that enabled Clark to contend that Fig had very obviously died from an unrelated disorder. In the fall of 1781, Fig "some time ill of a fever and pain of his right side" entered under Clark's care. Clark spotted "a swelling between the third and fourth false ribs," and subsequently "made an incision between

[103] Clark, "Histories of Cases of Abscesses in the Liver: with Observations on the Effects of Opening them," 341.

these ribs, where the abscess pointed best." "More than a quart of pus was discharged," the surgeon triumphantly reported. Fig continued to recover through the rainy season. Disaster struck, however, in early 1782. A British convoy arrived in the island with a cargo of French prisoners of war, who brought to the island a putrid dysentery that subsequently infected local residents, including Fig, who was carried off a week after by it. When he opened up Fig's body, Clark found "the abscess nearly healed," a sign that left "no doubt of his recovery, had it not been for this accidental disease."[104] As the post-mortem observations of Fig made clear, the slave had died from another malady. Clark's post-mortem observations in this case, then, supported rather than undermined the necessity of surgical intervention.

Clark failed to specify where he opened up his cadavers, but for physicians engaged in the study of yellow fever, it is quite possible that many of their dissections occurred in hospitals. Some of these groups, such as the Committee on Yellow Fever, may have used private hospitals for slaves or, more commonly, public hospitals housing the indigent and poor. Most commonly, physicians undertook their work in the islands' numerous military hospitals. The "considerable practice in that formidable disease here and my own connection with the hospital," of the St. Vincent physician George Davidson provided him with numerous trials on fever cadavers and made him an important resource for the Philadelphia fever expert Benjamin Rush. Davidson's connection with the St. Vincent military hospital had also "obliged [him] to pass to Grenada and also stay sometime at Barbados," where he again observed the internment of fever cadavers.[105]

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[104] Clark, "Histories of Cases of Abscesses in the Liver," 329.
[105] George Davidson, St. Vincent, July 22, 1796 to Benjamin Rush, Philadelphia, Vol. 37, Rush Family Papers.

Davidson's access paralleled the opportunities that other physicians with the British Army maintained. "Several of my medical friends have prosecuted dissections at the hospital," Davidson wrote in an article on yellow fever he published two months later.[106]

The numerous difficulties inhibiting the large-scale observation of even the most coordinated and well-timed post-mortem investigations are worth considering. Regardless of the supply of cadavers, the barriers attending their actual dissection compromised practitioners' efforts to reliably transform post-mortem observations into an established fact, based on concurrence from multiple eye-witnesses who had observed the opening and dissection of the cadaver.[107] Even when individuals and self-organized groups of practitioners acquired cadavers, the task of finding a well-lit and ventilated site where a cadaver might be laid out for close inspection by multiple investigators presented an additional hurdle to the project of verifying the inflammatory or bilious nature of the fever under study.

The Committee on Yellow Fever's triumphant tone in their victory over Grant belied the logistical complications that had beset its dissections. Without a university in 1794, Jamaica probably also lacked an anatomy theater. Difficulties suffused the task of finding a well-lit and ventilated site where a cadaver might be laid out for view and close inspection. Walker located space in the public hospital for this purpose, where he reported that five (of the seven) dissections occurred. Jamaica's medical marketplace might have offered more variety than the Leeward Islands for fever analysts seeking a

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[106] George Davidson, "Article III: Observations on the Yellow Fever, and its Proximate Cause. In a letter from Dr. George Davidson, dated Port-Royal, Martinique, September 20, 1796 to James Mease, M.D. Resident Physician of the Port of Philadelphia," *The Medical Repository of Original Essays and Intelligence, Relative to Physic, Surgery, and Chemistry* (November 1, 1797): 166.

[107] On the necessity of obtaining multiple witnesses to an event to transform an experiment into a matter of fact see Steven Shapin and Simon Schaffer, *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life* (Princeton, New Jersey: Princeton University Press, 1985), 55-69.

place to undertake dissections, in part because of the elaboration of privatized hospitals for slaveowners on the part of the island's druggists.[108] The other two dissections that the Jamaican Committee on Yellow Fever performed likely occurred in Kingston's spaces of medical care that serviced the plantation interior. The apothecaries Fyfe and Carrol operated a private hospital for slaves. In August, the Society conducted three trials on the "blood of salivated patients" under the apothecaries' care.[109] Fyfe and Carrol's hospital had previously accommodated upwards of fifteen physicians as they manipulated and shared blood samples. Perhaps the group's dissections other two dissections occurred in the same quarters.

The difficulty attending the preservation of fever cadavers, a necessity for practitioners who wanted to be sure that they witnessed the pathological effects of fever rather than the general putrefaction of organic matter, surpassed the hurdle of finding a space large enough to accommodate multiple eyewitnesses of a dissection. In Jamaica, "a dead body becomes intolerably offensive in less than six hours," Robert Wise wrote, using this fact to indict the island as the unhealthiest in the entire Caribbean.[110] The West Indian environment also threatened to wreak havoc on the Committee of Yellow Fever of Kingston's supply of cadavers. Kingston's *Daily Advertiser* could not publicize the date and place of the Committee's dissections fast enough to keep up with the decomposition of the group's cadavers. Scrambling to find hastier methods of communication than the

[108] See Dr. Angell's advertisement for his slave hospital in Liguanea Parish in *Royal Gazette* (Kingston, Jamaica) July 14, 1812; references to the public asylum in the *Daily Advertiser* (Kingston, Jamaica) June 26, 1790; Fyfe and Clarke's advertisement for their slave hospital in ibid., May 2, 1790.
[109] James Walker, *Royal Gazette*, August 8-15, 1794.
[110] Robert Wise, *One Hour's Advice, Respecting their Health to Persons Going to that Island of Jamaica* (London: 1798), 37. Wise extracted this tidbit and other advice for the upkeep of health in Jamaica from Edward Long's chapter "Regulations for the Preservation of Health in Jamaica," presented in Edward Long *History of Jamaica*, 3 (1774), 613-617.

newspaper, the Committee decided to provide information on the date and location of the dissections to "the gentlemen who seemed willing to pursue the original intention." That is, “those who already attended the Society's weekly meetings."[111] In defending the group's decision to forgo the use of newspapers, Walker invoked the destruction of the climate on the cadavers and the necessity of haste.

A group of physicians in Grenada was also unpleasantly reminded of the speed with which the climate adulterated human organs when one of the members neglected to “put [the tumor specimen] in spirits for some hours,” and “spoiled” the extraction.[112] The susceptibility of cadavers and organs to mismanagement, destruction by climate, and manipulation at the hands of rivals parallels the vulnerability of botanical specimens in processes of natural knowledge making and exchange among networks in the Caribbean, North America, and the British Isles.[113] Like other man-made and natural objects subject to predation and decay from the humidity and extreme temperatures of the Caribbean, corpses, it was widely acknowledged by laypeople and experts alike, putrefied swiftly. The humidity and temperature extremes of the Caribbean environment, then, constituted a determinative material dimension in the pathological investigation of disease.

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[111] James Walker, *Royal Gazette,* August 8-15, 1794.

[112] Mathias Gahagan, “The History of a Case, in which Singular Tumors from indurated and enlarged glands produced a fatal termination, by Dr. Mathias Gahagan, Physician in Grenada,” *Medical Commentaries for the Year MDCCLLXXXIX* (1789) *by Andrew Duncan,* Decade Second, Vol. IV (Edinburgh, 1790): 281-290, quote p. 287.

[113] In gardens and on ships, botanical specimens were, as scholars have noted, subject to predation from privateers, destruction from climate, and ruin due to neglect. See Kathleen Murphy and Christopher Parsons, “Ecosystems under Sail: Specimen Transport in the Eighteenth-Century French and British Atlantics,” *Early American Studies,* 10 (Fall 2012): 503-539. One of the flagship specimens in the Jamaican botanical garden, a cinnamon tree from the Ceylon territory in the East Indies arrived in the island as a spoil of warfare, one that British Admiral Rodney took as part of his prize when he captured a French Naval vessel during the War of American Independence. For the provenance of the Ceylon cinnamon tree in the Jamaican Botanical Garden see, Walter Maynard, Elizabeth Jackson, Joshua Steele and G. Wilson “Papers Relating to Colonies and Trade,” *Royal Transactions of the Society of Arts and Manufactures,* 4 (1786): 215-216.

Even the surgeon James Clark, who for the most part, used post-mortem dissections quite successfully to vindicate his claims, acknowledged the hurdles that climate and distance from his dead patients presented for his efforts to compile case histories. In 1788 Clark consulted and operated upon "Mr. H_____, planter, aged about 30," who had been long complaining of a pain in his ride side, for which a mercurial course had been pursued without effect."[114] By the time Mr. H entered Clark's care, it was necessary to operate and Clark subsequently "opened the tumor and about a pint of pus was discharged from it." Following his operation, Mr. H "would not allow the abscess to be cleaned and dressed; notwithstanding which, it was almost healed up in six weeks time when he went to the country." About three months after Mr. H's operation, "the orifice of the abscesses inflamed [Clark was informed by a second party] and opened a little, and discharged some fetid matter" and he died shortly thereafter.[115] In theory, Mr. H was the perfect case to illustrate Clark's contention that this patient and many patients had died from causes unrelated to the Dominican's surgical interventions. Clark's attempts to sustain this claim through post-mortem dissection were thwarted by the combination of the surgeon's distance from the cadaver and St. Vincent's relentless heat. "Being at a considerable distance in the country, I could not go to examine his body." "But there can be little doubt," Clark wrote, "that his death was owing to this fever, and not occasioned by the abscesses."[116] As evidenced by Clark's stories and the difficulties experienced by the Kingston Committee on Yellow Fever, Dancer, Hunter, Chisholm,

[114] Clark, "Histories of Cases of Abscesses in the Liver," 344.
[115] Ibid., 345.
[116] Ibid.,345.

and Davidson also likely encountered many logistical difficulties in conserving their cadavers.

Conclusion

Disagreement characterized interactions among West Indian practitioners on the topic of Caribbean fevers.[117] "Concerning the nature and treatment of the disease called the yellow fever," the Jamaican Thomas Dancer wrote in his 1809 retrospective analysis of the disputes, "the opinions of physicians have been so various and contradictory as scarcely to admit any reconciliation."[118] Dancer held the highly unpredictable nature of the "yellow fever" accountable, in part, for the disagreement between physicians in the island and the wider region. The "misunderstanding" between local practitioners, Dancer summarized, was "owing to an improper use of terms, or to the disease varying its character so much according to the circumstances of season, the quantity and force of contagion and other causes." Yellow fever, Dancer elaborated, "is not uniformly one and the same disease but is often a compound one, partaking at one time of the nature of the malignant fever, at another resembling the bilious remittent." Dancer's characterization attributed the rivalries and disputes among his contemporaries to properties particular to fevers in the West Indies, especially their capacity to transform into other febrile entities in the face of human and environmental contingencies. The emphasis Dancer gave to the difficulties practitioners encountered in naming fevers, spotlight the material issues that informed these disputes. That the West Indian medical world struggled to identity the

[117] Caribbean fever writers agreed that their counterparts in North America and the British Isles were misguided in their classifications of fevers in the torrid zone. They almost uniformly scoffed at the physician Benjamin Rush's argument that the yellow fever visiting communities and ports in the mid-Atlantic in 1794 was a milder version of the one devastating the islands. This argument was held up by many West Indian fever authors as a claim insensitive to the nuances, timing, and virility of fevers and their progress in the Caribbean.
[118] Thomas Dancer, *The Medical Assistant, or The Jamaica Practice of Physic* (Kingston:1809), 80.

fevers reveals how human landscapes of agricultural commodity production and imperial warfare in the late-eighteenth century Caribbean informed the taxonomic methods Dancer and his peers elaborated. To characterize these disputes as mere professional jockeying amongst provincial medical men would be to miss the productivity of these arguments and to overlook how materialist underpinnings in the Caribbean shaped knowledge-making about disease.

Material conditions distinctive to the Caribbean led fever theorists to arrive at very different conclusions about the nature and essential characteristics of fevers from their counterparts in the British Isles and North America. From the outset of the Seven Years War through the Wars of the French Revolution, naval vessels and slave ships disgorged soldiers, sailors, and slaves by the thousands into the Caribbean.[119] The accelerated movement of significant numbers of British soldiers and sailors and African slaves to the West Indies during the Wars of the French Revolution superseded the number of laboring men, women, and children mobilized and dislodged from their place of nativity during previous wars between Britain and France. This new movement of troops, sailors, and slaves produced a wave of fever epidemics. The distinctive social contours of war and sugar-based plantation slavery in the late-eighteenth-century Windwards and Jamaica transformed these islands into palimpsests for resident medical men to modify and in some cases completely rewrite the methodologies marshaled to pursue questions about the transmission of febrile diseases and the populations most susceptible to them.

[119] Arner, chapter 2, passim.

Violent fevers, which transformed in the face of the natural and human contingencies distinctive to the Caribbean, prompted local medical men to reinvigorate an older vocabulary of medical casuistry. These groups used the language of causes as scaffolding on which they hung and organized their interpretations of the cases of fever they encountered. In determining the identity of an epidemic disease medical men focused their investigations on three causes: *predisposing:* the susceptibility and lethality of fevers among populations differentiated by the modes of living that had created in them unique physiologies; *remote or exciting:* fevers' human and environmental pathways of contamination, and finally, *proximate:* fevers' pathological origin and the discrete paths each made throughout the body.

Staggering troop and slave mortality that occurred as a result of British expeditions and occupations in French and Spanish colonies and the British trade of African and Afro-Caribbean slaves to the region and the quasi-internment of these different laboring populations in the region's topographically distinctive spaces combined with practitioners' intellectual arsenal to set the stage for the golden age of fever theory. The human ecologies of agricultural labor and warfare in the late eighteenth century Caribbean determined the questions practitioners posed of fevers in their work to characterize and classify them. They also, significantly, forged the shape of the investigatory practices these groups used to pursue their answers.

The conclusions fever theorists reached about the predisposing, environmental, pathological, and human-made origins of tropical fevers were of far-reaching consequence. The most well-known outcome of this research was the fodder that it gave to imperial governors, military commanders, and pro-slavery writers to justify the use of

African military and agricultural labor in the region. But the import of inter-and intra-archipelagic disagreements among British West Indian practitioners also has consequences for history of medicine as well as the history of race. The repeated critiques, epistemic challenges, and rejoinders West Indian fever theorists lobbed at one another generated a coherent set investigatory practices that medical men and laypeople could use to comprehend epidemic disease more broadly. The questions and investigatory habits produced from these disputes were subsequently taken up by middling plantation practitioners and white managerial staff in study, analysis, and classification of a range of other well-known and new maladies prevalent among African and Afro-Caribbean populations like dirt-eating. The methodology emerging from West Indian dispute over fevers formed the seed concepts for practitioners in the region to investigate a range of other tropical maladies and epidemics ravaging plantations.

Chapter Four
"From whatever motive it proceeds":
Medicalizing Dirt-Eating in the Greater Caribbean, 1770-1803.

In 1787 the Jamaican propagandist and absentee planter Edward Long took to the floor of British Parliament and began a public relations campaign on behalf of the Jamaican plantation complex.[1] Urgency accompanied his task. Only a year prior, antislavery activists presented scenes of slaves dying from enervation and malnourishment, women unable to bear healthy infants, and midwives struggling to shepherd children past threatening infant disorders to the members of Parliament. Punctuating these images with stark mortality statistics, antislavery activists made the case that the conditions on most British West Indian sugar estates impeded the natural increase of slave populations in the Caribbean.[2] The materials that the Jamaican lobbyist Stephen Fuller had provided the M.P.s in an effort to assuage the concerns of Parliament had only made matters worse.[3] Fuller had listed ailments virulent in the Caribbean—neo-

[1] On the West Indian planter class and the imperial politics of slavery from the Seven Years' War onward see: Christopher L. Brown, *Moral Capital: Foundations of British Abolitionism* (Chapel Hill: UNC Press, 2006); David Lambert, *White Creole Culture: Politics and Identity during the Age of Abolition* (Cambridge: Cambridge UP, 2005); Christer Petley, *Slaveholders in Jamaica: Colonial Society and Culture during the Era of Abolition* (London: Pickering & Chatto, 2009); Petley, "Rethinking the Fall of the Planter Class," *Atlantic Studies* 9, no. 1 (2012); Trevor Burnard, "Powerless Masters: the Curious Decline of Jamaican Sugar Planters in the Foundational Period of British Abolitionism," *Slavery & Abolition*, vol. 32, no. 2 (June 2011), 185-98; Burnard, "Harvest Years? Reconfigurations of Empire in Jamaica, 1756-1807," *Journal of Imperial and Commonwealth History*, vol. 40, issue 4 (2012), 533-55.

[2] Barbados was the only Anglophone island in the Caribbean that, during the eighteenth century, achieved and sustained a natural rate of increase among the slave population.

[3] William Chisholme, a Jamaican absentee planter and prominent member of the Society of West Indian Merchants and Planters supported the efforts of Stephen Fuller and Edward Long to soften the image of plantation slavery in Jamaica. The three inundated Parliament with additional materials that they hoped would contextualize the answers the Jamaican Assembly had given in response to survey that Parliament had issued in 1786. For more on the Society of West Indian Planters and Merchants as a powerful political lobby in Georgian Britain and Jamaican absentees near absolute power within the WIPM lobby see David Beck Ryden, *West Indian Slavery and British Abolition, 1783-1807* (Cambridge: Cambridge University Press, 2009), 36-37; on Edward Long's role as an island agent of Jamaica see Lillian Penson, *The Colonial Agents of the British West Indies* (Routledge, 1971); and Andrew J. O'Shaughnessy, "The Formation of a Commercial Lobby: The West India Interest, British Colonial Policy, and the American Revolution," *The Historical Journal,* 40 (1997):71-95; On Fuller's involvement see Ibid., 72.

natal tetanus (locked-jaw), yaws, venereal disease, ulcers, guinea worms, smallpox, dropsy, dysentery, and dirt-eating—as the "great impediments to natural increase in Jamaica," hoping that Parliament would imagine these ailments had their origins in the noxious Caribbean environment.[4]

But Fuller had unwittingly depicted a complicated relationship between plantation slavery in the island and the creation of human suffering. Rather than absolving sugar plantation slavery from its role in creating a demographic disaster, the disorders in the Fuller's list linked, almost directly, the demands of sugar cultivation, sickness among slaves, and the failure of the slave population to naturally reproduce itself. Long intervened to correct Fuller's missteps. Imagining that contextual information on the origins of these maladies would cast the physiological effects of Jamaican sugar cultivation in a softer light, Long made the etiologies of the ailments common among plantation slave populations the focus of his political work.

He began with dirt-eating. "Dirt-eating," surely stuck out to Westminister's M.P.s as an anomaly in the list of familiar and long-theorized disorders they received.[5] Long

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[4] In his response to Parliament's questions asking the colonial Assemblies and Councils in the West Indies to identify the causes impeding the natural increase of slaves in the islands, Fuller also included one non-medical explanation: the "disproportion of women to men; the latter constituting," Fuller wrote, "in general two thirds of the importations." See "Report of the Lords of Trade on the Slave Trade, 1789, Part 1," in Sheila Lambert, ed., Vol. 69, *House of Commons Sessional Papers of the Eighteenth Century* (Wilmington: Scholarly Resources Inc., 1975), 213. Hereafter *HCSP*.

[5] Yaws was familiar to everyone in the Caribbean islands but only a handful of medical specialists in the British Isles. Smallpox, worms, venereal disease, dropsy, and dysentery were maladies with which the Lords of Trade and the British public likely had personal experience. At the very least, they had borne witness to the effects and progress of these disorders in their own households or, as was the case with venereal disease, learned about them in broadsheets advertising medicines for their cure. On Georgians' familiarity with venereal disease see Roy Porter, *Quacks: Fakers and Charlatans in English Medicine* (Charleston: Tempus, 2000), 138-152. Even those who had not visited the Caribbean or witnessed yaws firsthand would have known about the disorder, which was well theorized and familiar to the residents of Georgian London by 1788. On the circulation and acceptance of the claim in the Caribbean and Georgian London that yaws was an African form of syphilis see Katherine Paugh, "Yaws, Syphilis, Sexuality, and the Circulation of Medical Knowledge in the British Caribbean and the Atlantic World," *Bulletin of the History of Medicine,* 88 (2014): 225-252.

fixated on dirt-eating because its exoticism in the British Isles and the ambiguity enshrouding its causes had already begun to make the phenomenon vulnerable to manipulation by metropolitan antislavery lobbyists. These groups, as Long knew, had nearly convinced the M.P.s that dirt-eating had its origins in nutritional deficiencies. Slaves ingesting toxic soils in an effort to fend off starvation would be effective dramaturgy for the constitutional effects of malnourishment and starvation that West Indian estates created in its enslaved workforce. Long wanted to prevent this definition from becoming fixed in the minds of a larger British public. To suggest the many possibilities for why plantation slave populations in Jamaica ingested lethal amounts of dirt, Long inundated the House of Lords with additional materials—a spate of contingencies and conditions that the MPs would have to struggle through before arriving at a definitive explanation for the causes of dirt-eating. [6] Long, in turn, aggressively positioned himself as a local guide; his experiences as a Jamaican planter and discerning reader of West Indian natural histories allowed him to cut a path through the very thicket of disease theory he had created. As he selectively cited from the additional materials on dirt-eating, the route Long led the M.P.s down departed radically from the plot points that typically explained dirt-eating's causes and were accepted as common wisdom among planters and practitioners outside of Jamaica.

Long scurried to affix the definition of dirt-eating as a destructive addiction rather than a symptom of a stomach disorder. The phenomenon that was dirt-eating prevailed, in

[6] "The following papers being detached pieces of evidence referring to the island of Jamaica, parts of which it was difficult to arrange under the foregoing Heads, the Committee have therefore thought proper to insert the same here at length…. No, 2, 3, 4, 5, 6, 7, 8, several papers transmitted by Edward Long, Esq. as serving to illustrate some passages in the answers from Mr. Fuller and the other gentlemen," in "Report of the Lords of Trade on the Slave Trade, 1789, Part 1," in Sheila Lambert, ed., Vol. 69, *HCSP,* 280.

Long's telling, almost exclusively among recently imported slaves. Surveying enslaved peoples' activities with an anthropological eye, Long blamed ethnic customs that accompanied Africans to Jamaica via Atlantic commerce. "This is," Long began "another very pernicious custom which the imported Africans bring with them to Jamaica."[7] Slaves nurtured and refined these customs, he continued, within their informal economies. This custom grew to epidemic proportions, Long argued, through the mechanisms of cultural transmission. "Young children," Long warned, "are equally greedy of it; they either learn the habit from example of their parents, or are regaled with it as a dainty, or an antidote to acidities or pains in the stomach to which they are subject."[8] "It is certain," Long concluded his discussion of its spread, "that this abuse, from whatever motive it proceeds, adds largely to the annual death roll of Jamaica."[9] Long set the stage for the presentation of evidence that would position dirt-eating as a major check to the natural growth of Jamaica's slave population.

Pressing Patrick Browne's *Civil and Natural History of Jamaica* (1756) into service and upon Parliament, Long selectively quoted from Browne's medical summary of dirt-eating.[10] Browne had composed a lengthy geological description of the different types of "marles and marly substances," that slaves preferred.[11] Most helpfully for Long, Browne had hazarded a pathological analysis of the effects of marle's consumption. "It is

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[7] "No. 2, *Dirt-Eating,"* in "Report of the Lords of Trade on the Slave Trade, 1789, Part 1," in Sheila Lambert, ed., Vol. 69, *HCSP,* 280.
[8] Ibid, 281.
[9] Ibid, 281.
[10] In Browne's *Natural History,* dirt-eating appeared in a lengthier chapter in which Browne surveyed the soils of Jamaica, noting their different qualities and suitability for commercial agriculture. See "Section V. Of Earth and Earthy Substances," in Patrick Browne, *The Civil and Natural History of Jamaica* (London, 1756), 60-64. Dirt-eating is discussed on p. 64.
[11] Patrick Browne, *The Civil and Natural History of Jamaica* (London, 1756), 64 quoted in No. 2, *Dirt-Eating,"* in "Report of the Lords of Trade on the Slave Trade, 1789, Part 1," in Sheila Lambert, ed., Vol. 69, *HCSP,* 281.

the most certain poison I have known, when used for any length of time," he observed. Browne explained how marle altered the circulatory system and corrupted the blood and other vital "juices." "For many months before they die," Browne had written decades earlier, "a general languor affects the machine, and all the internal parts, lips, gum and tongue, are quite pale."[12] Browne's description established dirt-eating's lethality, which Long attached to his own testimony for dramatic effect.

It is telling that Long prevented Parliament from viewing the entirety of Browne's discussion of dirt-eating, though it is not difficult to imagine why: parts of Browne's account undermined the case Long was building before the Lords. The naturalist had pointed to factors far removed from the cultural traditions of recently disembarked African immigrants. Dirt-eating, as Browne explained, was but one symptom of the condition of a disordered stomach. Malnourishment and neglect, Browne had suggested in 1756, were vital preconditions that created the disordered state of the stomach. "Hunger, worms, or unnatural habit of the body," Browne explained, produced the disturbance in the stomach and generated in patients an insatiable desire for dirt. [13] In the wrong hands, the naturalist's explanation, particularly Browne's emphasis on the nebulous "unnatural habit of body," a code for malnourishment perhaps, could be taken to show that systematic deficiencies in slave management rather than African customs were to blame for slaves' ghastly and lethal appetite for marle. Long presented *most* of Browne's account of dirt-eating. The seasoned lobbyist edited out the sentence in the text where Browne speculatively linked the origins of dirt-eating to a disorder of the stomach.

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[12] Patrick Browne, *The Civil and Natural History of Jamaica* (London, 1756), 64 quoted in No. 2, *Dirt-Eating,"* in "Report of the Lords of Trade on the Slave Trade, 1789, Part 1," in Sheila Lambert, ed., Vol. 69, *HCSP,* 281.
[13] Patrick Browne, *The Civil and Natural History of Jamaica* (London, 1756), 64.

The exegesis Long performed on Browne created an explanation of dirt-eating was very different from the one prevalent in Britain's Caribbean colonies as well as in South Carolina and Georgia.[14] By 1780, both laypeople and experts in slave societies outside Jamaica envisioned dirt-eating as the symptom of a deficiency disease, a disorder caused by malnourishment or exposure to noxious airs, sometimes both. Long presumably knew about this explanation but instead spotlighted the sections where Browne had verified dirt-eating's lethality. The propagandist's editorial handiwork shows the variety of explanations, operative in the Anglophone slave societies of the Atlantic world, that were available to account for the origins of dirt-eating. Indeed the ease with which Long remolded dirt-eating's etiology so that it aligned with the interests of Jamaica's plantation complex under Parliamentary scrutiny encapsulates the malleability of dirt-eating by diverse groups in the Caribbean for particular political ends.

Long's novel discussion of the causes of dirt-eating reveals that habits were a plausible explanation for dirt-eating in Jamaica. Elsewhere a phenomenon of poor diet and neglect, the draconian nature of white-black relations in Jamaica transformed predominant etiologies of dirt-eating. Just as it had in Long's presentation to Parliament, "dirt-eating" in Jamaica would come to describe unnatural habit of eating dirt, one originating in the undesirable customs among newly arrived African slaves who were, white Jamaicans maintained, difficult to acculturate to plantation slavery.

This chapter situates the varied degrees of violence and conflict between white plantation managerial staff and enslaved people as powerful forces shaping the medical

[14] For the purposes of clarity, I have combined the Anglophone Caribbean Islands, South Carolina, and Georgia under the heading of the Greater Caribbean. Throughout the chapter, I use this moniker to distinguish these regions from Jamaica, recognizing of course, the vast differences pervaded the slave societies of South Carolina and Georgia and that of Grenada, Dominica, and Antigua.

reframing of specific plantation maladies in Jamaica and elsewhere in the Greater Caribbean. The regionally distinctive medical ideas that explained enslaved peoples' dirt-eating and emerged in the last decades of the eighteenth century grew out of, I argue, geographically specific slave regimes. The social relations between enslaved people and whites in the slave societies of the Anglophone world, where enslaved Africans' and creoles' activities were met varying degrees of suspicion and hostility, I show, generated distinctive epistemic contexts from which practitioners brought dirt-eating to life as either a recognizable disorder or a pathological behavior. Thus as white overseers and planters in Jamaica narrated enslaved Africans' and creoles' motivations, they situated the activities of individual dirt-eaters within the larger categories of ethnicity and acculturation. Their counterparts elsewhere, meanwhile, plot individual cases of dirt-eating within the larger matrix of environmental hazards, attributing dirt-eating to either malnourishment, melancholy, and/or excessive exposure.

Seeking to resolve contradictory claims about dirt-eating's effects and cure, urban practitioners in the Greater Caribbean began by focusing on dirt-eating's origins—as either a custom, symptom of another disorder, or a disease in it of itself. As they sorted through, retained, and discarded the information that managerial staff had provided them, practitioners assimilated into their medical theories the sociological frameworks of white managerial staff. To be sure, urban medical practitioners in the Greater Caribbean insisted on the difference between their techniques and goals of medical knowledge-making and that of white elite and middling laypeople in the region. Yet the discernable movement of overseers' and planters' *observations* of dirt-eating into practitioners' case studies tells a different story: one in which managerial narratives continued to shape

practitioners' ideas about dirt-eating's primary symptoms and its pathological progress. The persistence of managerial *interpretations* of dirt-eating in medical men's accounts, moreover, illustrate how profoundly medical writers' conceptions of the ailment's origins and causes were deeply grounded in the disciplinary and managerial knowledge generated inside the region's distinctive plantation regimes. Analysis of enslaved peoples', managerial staff's, and medical men's characterizations of dirt-eating's origins reveals much about the ways in which overseers', attorneys' and planters' conflicts with enslaved people over dirt-eating heavily inflected medical efforts to reframe its etiology and dictate its cure.

The capacity of early modern medicine to resolve questions about dirt-eating's etiology fell short in telling ways, in large part because practitioners formed their ideas about dirt-eating from data they collected from plantation societies that were shaped by varying degrees of hostility and violence among blacks and whites. Most urban medical practitioners located outside of Jamaica began from the premise that dirt-eating was in fact the French, *mal d'estomac* or the Anglophone term, *pica.* This faction worked to ascertain whether the disorders, *mal d'estomac* or *pica,* represented a tropical iteration of a well-known stomach complaint prevalent in the British Isles and the temperate zones of North America or an entirely new disease to which plantation slaves in the Greater Caribbean were particularly susceptible.

Jamaican medical men's definition of dirt-eating departed from the medical model emerging in rest of the Greater Caribbean. In Jamaica, medical practitioners used dirt-eating, the pernicious ethnic habit and a voluntary custom as a jumping off point. Pathologizing dirt-eating as a habit prevalent among recently imported African slaves

who had yet to adjust to the rigors of plantation slavery, practitioners in the island thus expunged any environmental factors frequently experienced by enslaved plantation populations, such as malnourishment or exposure, from dirt-eating's etiology. What these regional discrepancies in the medical definition of dirt-eating show, in summary, is that medical explanations dirt-eating were molded by the plantation societies from which they sprung.

Scholars have been slow to recognize managerial medical knowledge and even less interested in examining the degree to which medical ideas describing the different types of maladies in the Caribbean that practitioners discussed in print were profoundly shaped by the conditions that shaped knowledge making on different Caribbean plantations. One reason for this oversight might be because the relationships among the actors involved in these exchanges—middling overseers and formally educated medical men—lack the epistemic frictions pervasive in scholarship on the transmission of botanical know-how between white colonial botanists and their indigenous and African informants. Historically, white colonists' vocal dismissals of their informants' capacity to understand how a particular plant achieved its therapeutic outcome has made the unlikely alliances and subsequent conflicts of interpretive authority between these two sets of collaborators more readily visible to contemporary scholars. The appeal of these latter exchanges between two culturally incommensurate groups has rendered the ethnically and confessionally diverse networks of botanical specimen-exchange the paradigm for how scholars imagine and research medical knowledge-making in the British Atlantic world.[15]

[15] Susan Scott Parrish, *American Curiosity: Cultures of Natural History in the Colonial British Atlantic World* (Williamsburg: University of North Carolina Press, 2006); Kathleen Murphy, "Translating the

A very different dynamic pervaded relations between practitioners in the Greater Caribbean and their white middling informants. Epistemic incommensurability, for one, was less a problem between white practitioners and their lay counterparts than it was in the ethnically and racially diverse botanical networks of the Atlantic world. The intellectual distance between the groups of white observers that this chapter examines was one of degrees not chasms. Different motivations drove the urban practitioners who populate this chapter than those of their naturalist contemporaries. Envisioning themselves as taxonomists of disease, practitioners' diagnostic training, they argued, allowed them to better differentiate between various ailments that had similar presentations and sets of symptoms than their non-specialists white contemporaries. "It is," the Jamaican physician Thomas Dancer wrote, "of the utmost importance, to ascertain whether dirt-eating is a primary or secondary disease; that is, whether this inclination is the effect of some preceding complaint, or whether the symptoms are not brought on subsequent to the practice."[16] In the literature they produced on the diseases prevalent in the Caribbean and to which plantation slaves were particularly susceptible, elite medical men in the region distanced their methods from the ways of knowing prevalent among their culturally and geographically middling whites in their proximity. But unlike naturalists working with enslaved and indigenous savants, practitioners studying disease did not decry the contributions of their white informants outright. Instead practitioners subsumed the observations and interpretations of planters, overseers,

Vernacular: Indigenous and African Knowledge in the Eighteenth-Century British Atlantic," *Atlantic Studies,* 8 (2011): 29-48.

[16] Thomas Dancer, *The Medical Assistant* (1801), 178.

and attorneys to footnotes and paratextural materials and left them there without comment.

Among scholars of slavery, the topic of dirt-eating has attracted scant attention because historians of slavery do not make it a methodological habit to historicize disease as a social construct.[17] The idea that social forces and individual personae bring diseases—as entities with specific etiologies, victims, and symptoms—into existence as visible and recognizable ailments conflicts with quantitative methods that prevail among Anglophone historians of slavery. Traditionally, the biological reality of disease serves as a jumping off point from which historians of slavery in the British Atlantic World study demographic changes in plantation slave populations. The quantitative data born out of these investigations facilitates scholars' investigations into when different African slave populations become a minority, and creole (native-born) slaves become the demographically and culturally dominant force within enslaved communities and plantation societies. Thus in focusing on the different definitions of dirt-eating that emerged from the different regimes of coercion and violence in plantation America, this chapter highlights the effect of demographic differences on medicine rather than medicine's effect on demography, and suggests to scholars of slavery the insights gained when one investigates disease as a social as well as a natural phenomenon.

Taking seriously the ways in which social relations mediated the interpretation of a disorder can revitalize the history of disease in the slave societies of the Atlantic

[17] What little published work that exists on the ambiguous phenomenon that was dirt-eating has ignored the social relations that mediated laypeople's encounters with it. Scholars have mostly focused on the biological imperatives that drove this behavior, retrospectively diagnosing most cases of dirt-eating among slaves as the effects of chronic malnourishment. Kenneth F. Kiple and Virginia H. Kiple, "Deficiency Diseases in the Caribbean," *The Journal of Interdisciplinary History,* 11 (Autumn, 1980): 197-215, dirt-eating, 207-08; Richard Sheridan, *Doctors and Slaves: A Medical and Demographic History of Slavery in the British West Indies, 1680-1834* (Cambridge: Cambridge University Press, 1985), 216-18.

world.[18] Starting from relations between the suffer(s) and individual or groups that interpreted their pains throws into sharp relief the ways in which the social identity of the individual sufferer—as an African, creole, slave, and, in case of dirt-eating, often criminal—shaped the diagnosis of his or her particular case. [19] Such a framework also shows how the broader attributes that whites assigned to a given African tribe—as an ethnic group prone to rebellion, resistance, melancholy, or its tractability—determined whether a behavior of an individual from that group was interpreted as a disorder, and how, in turn, the medical world at large classified and interpreted their symptoms. Thinking through the ways in which the degrees of violence and hostility within different slave regimes dictated how managerial staff and practitioners encountered and responded to dirt-eating among enslaved people is thus as of much consequence for scholars of African slavery in the Atlantic as it is for historians of medicine who seek to excavate the multiple histories of sufferers and patients in the early modern period.[20]

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[18] Rana Hogarth's work in progress approaches dirt-eating through the lens of cultural history, Rana A. Hogarth, *Blackness in Transit: Medicine and the Making of Difference in the Atlantic World, 1780-1840,* (manuscript forthcoming). But Hogarth does not analyze the social components that shaped the meaning of dirt-eating to different sets of actors. Hogarth argues that the development of dirt-eating as a legitimate disorder on the part of physicians did much to advance the racialization of disease and reify constitutionally-based categories of difference. It is difficult to square Hogarth's argument, which aligns the late eighteenth-century medicalization of dirt-eating with the hardening of ideas of constitutionally-based racial difference, with her eighteenth-century sources, the majority of which posit that dirt-eating had its origins in African customs that then devolved into pernicious habits. None of her sources mention pigmentation or link physical difference to an appetite for dirt.

[19] Here I use the term "sufferer" deliberately in accord with Lucinda Beier's argument that those experiencing departures from normal faculties and sensations understood did not necessarily interpret these experiences as medical. In such a context, it would be inaccurate to refer to these individuals as "patients." See Lucinda Beier, *Sufferers and Healers: The Experience of Illness in Seventeenth-century England,* (London: Routledge and Kegan Paul, 1987).

[20] The history of the patient is expanding in exciting ways. For older literature on how patients' narratives shaped medical knowledge making: N.D. Jewson, "Medical Knowledge and the Patronage System in Eighteenth Century England", Sociology 8 (1974): 369-85; Mary Elizabeth Fissell, *Patients, Power, and the Poor in Eighteenth-Century Bristol* (Cambridge: Cambridge University Press, 1991); Wayne Wild, "Doctor-Patient Correspondence in Eighteenth-century Britain: A Change in Rhetoric and Relationship", *Studies in Eighteenth-Century Culture*, 29 (2000): 47-64. A related literature on the patient stresses how differences in the patient's gender and legal status shaped their experiences and ways that they narrated and communicated their pain. See particularly Catherine Crawford, "Patients' Rights and the Law of Contract

The first section of this chapter examines the multiple meanings that dirt-eating held for enslaved people in throughout the Caribbean and examines how white managerial staff responded. In the second part, I analyze the intellectual explanations that practitioners outside of Jamaica proffered for the phenomena. This section is followed by one that focuses on the accounts that the Jamaican practitioners John Hunter, John Williamson, James Clarke, and Thomas Dancer offered up for the public's interpretation of dirt-eating. This group positioned dirt-eating as a pathological response to fear, melancholy, and plantation culture, affirming in the process, managerial staff's uniquely punitive interpretations of dirt-eating as a behavior common among Africans. Such definitions also legitimated managerial staffs' violent "cures." The fourth and final section analyzes the meanings that accrued to the post-mortem dissections of deceased dirt-eaters in Jamaica, a colony where officials regularly dismembered the corpses of enslaved runaways, rebels, and obeah practitioners in order to spiritually desecrate the dead and deter these activities. The dissection of deceased dirt-eaters, which occurred on a scale in Jamaica that I have not found elsewhere, reaffirmed the criminal status of enslaved dirt-eaters, when it was undertaken within this broader disciplinary context.

I. Throwing Grit in the Plantation Machine: Slaves and Dirt-Eating

The soil was an oracle in the Greater Caribbean during the late eighteenth-century. Planters looked to the "great variety of soils…so variously and capriciously," distributed throughout an estate to forecast profits.[21] Using the proto-sedimentology

in Eighteenth-century London," *Social History of Medicine,* 13 (2000): 381-410; Olivia Weisser, "Grieved and Disordered: Gender and Emotion in Early Modern Patient Narratives," *Journal of Medieval and Early Modern Studies,* 43 (2013): 247-273.

[21] John Stewart, *An Account of Jamaica and its Inhabitants by a Gentleman Long Resident in the West Indies* (Kingston, Jamaica: 1809), 21.

suffusing civil and natural histories of the region as well as plantation management manuals, planters prophesied about the productivity of an estate's different "pieces" (tracts of arable ground) and attempted to estimate the amount of time and slave labor necessary to make different pieces reach their full commercial potential. [22] The mineral distribution of both an island's and an estate's lands, some argued, foretold not only its economic potential but its reliance upon the Atlantic slave trade as well. Edward Long legitimized the viability of this method of calculation in his 1774 *History of Jamaica,* wherein he divided Jamaica into three orders, those with soils that were "the most stiff and heavy," those "as have the lightest," and finally, "those whose soil may be esteemed between both." A region's soil quality dictated the amount of labor an estate would need in order to produce enough crops so as to remain financially afloat.[23] Plantation slaves of course made it their business to study and know the granular makeup of different provision grounds because this information allowed them to speculate on their lands' provisioning potential as well.

A constant refrain among slaveholders and overseers concerned the lethality of dirt-eating. Lingering behind these claims about dirt-eating's toxicity were slave owners' fears that dirt-eating frustrated their commercial ambitions to wrench productivity from enslaved Africans. Sam Howatt, the overseer of the Lucky Hill estate in Jamaica

[22] The composition the different types of loams, clays and moulds, their deposition in different parishes, and the effects of weathering on these soils' chemical and physical properties figured prominently in the economic calculations of planters, field slaves, and those struggling to maintain provision grounds adequate to feed families. See for example Roger Hope Elletson's concern about his soils in Roger Hope Elletson, Spa England, July 20, 1770 to Humphrey Grant, overseer in Hope Plantation, St. Andrew's Parish, Jamaica in Roger Hope Elletson Letterbook 1769, Box 14, Stowe Papers, Huntington Library, San Marino, CA.
[23] Dividing "the different parishes according to the general condition of their soils," Long made differences in the composition of Jamaica's terrains the chief variable that he would use to calculate the mean number of slaves a Jamaican estate needed in order to produce three hundred hogsheads of sugar per year. Edward Long, *The History of Jamaica,* Vol. 2 (London, 1774), 439.

informed the absentee owner Gibson Dalzell that cases of dirt-eating on his estate had followed a similar progression, terminating in death. "In my first letter I wrote you, I mentioned when I first came to the estate, that there was 6 or 8 of the negroes that eat dirt, which threw them into dropsies, two of which I recovered but the rest I could not, neither by my own skill nor the advise [sic] of Dr. Aikenhead." Howatt estimated that Dalzell "have lost six children of the same malady since for which there is no remedy, for so long as they continue the cause, the effects must of course continue…"[24] Simon Taylor, the attorney for the Golden Grove plantation in Jamaica, complained about dirt-eating's effects upon labor productivity. "When they [slaves] cannot get at" traditional types of clays, "they will eat cinders, ashes, or in short any sort of stuff when they have once taken to this which is called dirt." Taylor equated the habit with missed work and the decrease of profits because, he explained, enslaved dirt-eaters "infallibly fall into dropsies."[25] Fretting over the ensuing retching, debility, and exhaustion and the inevitable dispossession of their human property, dirt-eating, slaveholders maintained, weakened the estate's workforce, decreased its output, and created dropsies and other maladies that subsequently led to the dirt-eater's demise.

[24] Sam Howatt, Lucky Hill, Jamaica to (Gibson Dalzell, Edinburgh), October 22, 1751 in Gordon of Fife Papers, MS 3175/Z/60/1 1742-56, The Sir Duncan Rice Library, University of Aberdeen, Aberdeen, Scotland.

[25] Simon Taylor, Kingston to Chaloner Arcedekne May 7, 1789 in Vanneck Papers, 3A/1789/. The plantation surgeon for the Golden Grove estate, Benjamin Turney, supported Simon's prognoses of dirt-eating. Turney reported Golden Grove's absentee owner Chaloner Arcedencke that Arcedencke had lost a handful of children on the estate who were "at so early an age, particularly subject to dirt eating as well as Worms." Benjamin Turney, St.Thomas-in-the-East, Jamaica to Chaloner Arcedeckne, May 1, 1793 in Vanneck Papers, 3A/1793/10. Over half a year later, the problem persisted on the Golden Grove estate, where Arcedencke had lost, Turney reported, "five children this year by the Yaws and dirt eating, to which they are particularly addicted under this disease, and one of a fever." Benjamin Turney St.Thomas-in-the-East, Jamaica to Chaloner Arcedeckne, December 1, 1793 in Vanneck Papers, 3A/1793/34, Department of Manuscripts and Archives, Cambridge University Library (hereafter Vanneck MS).

Managers in Jamaica often situated dirt-eating alongside running away, rebellion, and feigned sickness—the order of intractable activities that overseers and attorneys attributed to specific ethnicities and struggled to control in process of extracting work. White managerial staff in Jamaica claimed that newly arrived Africans—the groups only recently dragooned into the racial and labor hierarchy of plantation slavery—were both the most rebellious and knowledgeable about dirt-eating's poisonous effects. Africans, this logic went, were therefore most apt to use dirt's toxic qualities to their own advantage.[26] "When forced to labor in their own provision grounds," Simon Taylor advised, certain ethnicities of slaves "give themselves up and take to dirt-eating, which is inevitable death." [27] Taylor complained about the indolence of "Angola and Mundingo Negroes," whom, he speculated, "are too lazy to provide provisions for themselves and who have always been used to be handfed." [28] Certain ethnic groups deliberately took up dirt-eating, white Jamaicans claimed, knowing it would encourage overseers to increase their provision rations. [29] In managerial taxonomies of dirt-eating, one of the broadly shared conclusions was that it primarily affected, as either a habit or a disorder, new African immigrants.

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[26] The sternest interpreter, the Jamaican practitioner and fever analyst John Hunter maintained that slaves "are well aware that it will infallibly destroy them." Hunter's remark likely parroted the interpretations of Jamaica's managerial staff, with whom Hunter socialized and exchanged medical and scientific information Examples of this from Hunter's book and other yellow fever guys' books. John Hunter, *Observations on the Diseases of the Army in Jamaica* (London, 1796), 249.

[27] Simon Taylor, Kingston, Jamaica to Chaloner Arcedeckne 21 July, 1787, Vanneck MS, 3A/1787/12. Geophagy was likely common among slaves on the Golden Grove Estate, as at least one of the estate's runaways exhibited symptoms that were often attributed to the ingestion of dirt. See for example the Golden Grove manager's description the runaway "Henry," whom he described as "very erect" with a "yellow tinge familiar to that of a bloated negro," in 20, June, 1793, *Cornwall Chronicle.*

[28] On Taylor's wealth and political influence in the island, see R.B. Sheridan, "Simon Taylor, Sugar Tycoon of Jamaica, 1740-1813," *Agricultural History,* 5 (1971): 285-296.

[29] Testimony of William Fitzmaurice, 9 March 1791 in "Minutes of the Evidence Taken in a Report Before a Committee of the House of Assembly, being a Select Committee Appointed to Take the Examination of Witnesses Respecting the African Trade," in Sheila Lambert, ed., Vol. 82., *HCSP,* 229.

The claim that specific African ethnic groups had a predilection for dirt-eating followed the same itineraries of managerial advice that spoke to the cultural and biological seasoning of slaves recently brought to the island from the coastal regions of Africa. These ideas originated with individuals like Simon Taylor, who simultaneously participated in the transatlantic slave trade, operated as an attorney for several absentees, and managed his own estate. Proto-anthropological claims about the behavior of different ethnicities hardened into fact when, in plantation management texts and some natural histories of the West Indies, agricultural writers and naturalists repeated, critiqued, and refined slave traders' statements.[30] "Great care therefore ought to be had in buying your first negroes on your estate…most particularly," the Jamaican plantation advise author John Dovaston wrote, "that they come from a good part of the coast." [31] Dovaston encouraged his readers to familiarize themselves with the "temper and dispositions, manners and customs (?) of negroes," which, Dovaston wrote in 1774, "differ much according to the disparate parts of the coast of Africa where they are bought." Tellingly, Dovaston recruited dirt-eating to illustrate his admonition: "Some negroes are much addicted to eating of dirt and often will eat of chalk and sooner choose it than their food." The claim locating dirt-eating in the customs of specific ethnic groups thus originated with slave traders' efforts to market different shipments of enslaved cargo sold in North

[30] The idea that only Africans from certain regions of the coast engaged in dirt-eating became so commonplace among planters that it was one of the arguments Edward Long made before the members of Parliament considering the condition of slaves on West Indian estates. Long described dirt-eating as a "very pernicious custom which the imported Africans bring with them to Jamaica." "It is more frequently remarked," he elaborated, "among the Popos than the natives of any other country; but we do not affirm positively that negroes from other parts of Africa may not likewise be addicted to it." See Long, "Jamaica. Appendix," in Vol. 69, *HCSP,* 281.

[31] John Dovaston, "Agricultural Americana: Or Improvements in West-India Husbandry Considered wherein the present system of Husbandry used in England is applyed to the cultivation or growing of sugar canes to advantage,*"* 244, 251 in Codex, Eng. 60, Vol 2. John Carter Brown Library, Providence, Rhode Island.

America and the West Indies, but it assumed the status of fact as managerial communities of expertise circulated and debated these claims orally, in manuscript, and in print.

Conceptualized as an imported custom, dirt-eating among Jamaican managerial staff appeared very similar to the African botanical knowledge of poisons that worried whites throughout the slave societies of the Greater Caribbean. "Negro slaves here seem to be too well acquainted with the vegetable poisons," the South Carolinian physician and botanist Alexander Garden observed in a letter to Edinburgh Professor of Botany Charles Alston. Throughout the Atlantic, women's knowledge of vegetable poisons as well as that possessed by categories of people with suspect loyalties (servants, apprentices, and foreigners) provoked anxiety among male medical authorities and heads of households.[32] But in the Anglo and Francophone Caribbean, enslaved peoples' knowledge of botanical poisons also signaled the endurance of African practices and their viability within enslaved communities.[33] "Whether they gain that knowledge in this province or before they leave Africa, I know not, tho I imagine the latter, which they make use of to take away the lives of their masters, who they think uses them ill, or indeed the life of any person from whom they conceive any hatred, or by whom they imagine themselves injured," Alexander Garden wrote to Alston.[34] The persistence of dirt-eating on large estates similarly highlighted not only weaknesses in the management and supervision of

[32] D. Purkiss, "Women's Stories of Witchcraft in Early Modern England: The House, the Body, the Child," *Gender and History*, 7 (1995): 408-432, esp. 413-17. Margaret Pelling, "Compromised by Gender: the Role of the Male Medical Practitioner in Early Modern England," in Hilary Marland and Margaret Pelling, eds. *The Task of Healing. Medicine, Religion and Gender in England and the Netherlands 1450-1800* (Rotterdam: Erasmus, 1996), 101-33 esp. 105.

[33] In the colonial context, authorities mapped fears of poisons onto ethnic and racial subalterns, particularly enslaved Africans. See Diana Paton, "Witchcraft, Poison, Law, and Atlantic Slavery," *William and Mary Quarterly,* 3rd ser., 69 (2012): 235-64.

[34] Alexander Garden, Charleston, South Carolina to Charles Alston, Edinburgh, January 21, 1753, Charles Alston Correspondence, Laing MS III. Center for Research Collections, Edinburgh University Library, Edinburgh, Scotland.

large slave labor forces but the resistance of Africans and their descendants to acculturate to Jamaican disciplinary structures. Dirt-eating, like slaves' deliberate and selective use of "vegetable poisons," staged the gaping chasm between white, African, and Afro-Caribbean dietetic and botanical proficiencies. White Jamaicans linked dirt-eating with enslaved people's resistance to the plantation complex and did so because both dirt-eaters and enslaved botanical savants, whites argued, were often recent African immigrants whose natural knowledge revealed their indifference to white structures of power.

White agriculturalists and enslaved people had very different ideas about what motivated slaves to ingest dirt. All of our information about the forces that led enslaved people to chronically consume dirt comes from white sources; read between the lines, however, these narratives indicate that dirt-eating held a litany of different meanings for enslaved people. Many white accounts of dirt-eating in Jamaica listed suicide or self-murder as the drive behind slaves' dirt-eating, yet this particular motivation must be understood as one end of the spectrum. What white narratives that plot self-poisoning as a motivation for dirt-eating do show is that enslaved people quite effectively operationalized dirt-eating's imagined toxic properties to either hasten their deaths or to communicate grievances over their displacement, provisions, and working conditions.

In one case, white Jamaicans surmised that a group of creole slaves turned to dirt-eating in order to grapple with the effects of dislocation that imperial warfare had foisted upon them. In 1783 the slaveholder and loyalist Colonel John McGillivray Esq. fled his Georgia plantation and relocated to Jamaica. His exile uprooted the 300-400 slaves from his rice plantation, whom he brought with him to the island. Initially, McGillivray hesitated to reinvest his capital and slaves in the uncertain business of a sugar

plantation.[35] Instead the Colonel took up residence in Kingston and hired out his slaves to the island assembly, where they were subsequently "employed on the public fortifications."[36] During this period, the McGillivray slaves' health garnered surprise from white onlookers because of the infamy that road-building and structure-repair maintained in the island as particularly arduous labor. The McGillivray slaves remained, one contemporary reported, "in the highest state of their health during the hard labour they were employed in." The observer theorized that the McGillivray slaves' preternatural health in Kingston stemmed from their belief in their imminent return to Georgia.[37] The promise of home, he rationalized, accounted for the remarkable spirits and health the slaves exhibited during their employment by the island assembly on the public works and their noted abstention from dirt-eating.

Cruelly, the McGillivray slaves received misleading information about imminence of their return to family and friends in Georgia. Within a year the Colonel relocated from Kingston to a plantation in St. Thomas in the East, resettling his slaves on the plantation where they "took to dirt-eating." The Colonel "did every thing to please and satisfy them." White observers dismissed the possibility the dirt-eating was related to the malnourishment the slaves might have suffered due to their dependence upon the estate's abandoned provision grounds. Their evidence against malnourishment as a cause of the slaves' dirt-eating came from the Colonel's own astonished reports on the futility of his ministrations to the slaves' health. "He exacted little or no labour from them; he furnished them with the greatest plenty of pork, beef, rice, flour etc. notwithstanding they

[35] Justin Roberts, "Uncertain Business: A Case Study of British Plantation Management, 1770-1793," *Slavery and Abolition,* 32 (2011): 247-68.
[36] Dancer (1801), 177 fn.
[37] Ibid.

were in possession of hogs, poultry, etc of their own." "No cause could be assigned for," the onset of their dirt-eating when they were resettled in the parish of St. Thomas, "but their having lost the hopes of returning to America" white observers concluded.[38]

When McGillivray's slaves realized permanence of their exile to Jamaica, this story went, they turned to dirt-eating out of despair. Here and in other instances, reading between the lines in white narratives suggests the possibility that enslaved people did in fact use dirt-eating as a bargaining tool. The McGillivray slaves might have commenced dirt-eating to compensate for caloric and dietary deficiencies brought about by their forced dislocation or to protest their forced move from the Georgia Lowcountry to Jamaica and the attendant loss of family, friends, and resources. We ultimately don't know. What is clear is that the Colonel was unwilling to countenance that malnourishment had motivated the slaves' dirt-eating. The Colonel argued instead that the slaves' melancholy had motivated their behavior. McGillivray attempted to buoy their spirits with a range of social activities. "To contribute to their amusement, he built a dancing room, and furnished them with fiddlers." Yet though the slaves witnessed the lethal consequences of dirt-eating among their peers, they persisted. "The malady was incurable, he lost above one hundred negroes." Tellingly, it was only when Colonel McGillivray died, that they "ceased to eat dirt." [39] Quite possibly, their previous experiences as the moveable objects of inheritance law gave the remaining slaves a reason to hope that McGillivray's death portended their return to North America. For both new African and seasoned creole slaves reeling from the effects of social

[38] Ibid.
[39] Ibid.

dislocation, dirt-eating might sometimes function as a culturally-intelligible bargaining chip for repatriation.

For slaves with longstanding ties to a particular estate—whether African or Creole—dirt-eating sometimes functioned as a tool of resistance, a means to signal an unacceptable alteration in timeworn reciprocal obligations. In the 1790s, the attorneys for one Jamaican absentee hired a new overseer. The new overseer disregarded privileges and accommodations previously in place on the estate. In response, the slaves on the plantation "from dissatisfaction took to eating dirt, and great numbers of them died." Alarmed, the estate's attorney acted quickly to repair tattered relations. "The overseer being discharged, the complaint ceased, but the survivors declared that, if the overseer had remained, they would all have given themselves up to the same fate."[40] Slaves also employed dirt-eating to communicate their dissatisfaction with specific work routines and the quality and quantity of rations. In one example that comes from outside Jamaica, we see that the Barbadian overseer Russell Gill believed this to be the case. Gill had, as he relayed in a letter he wrote to the absentee owner of Turner's Hall, "lately found it to be a custom with your slaves when they do not want to work, and be well fed or rather better so than common," to engage in dirt-eating.[41] "This," Gill continued, "very soon puts them in a state of [disabling?] and dropsy in which they can linger perhaps two or three years, eating all the time the most nourishing food and wine is to be given them."[42] Slaves, as

[40] The Jamaican, Thomas Dancer, who had relayed this anecdote and went on to anatomize the causes of dirt-eating for his readers listed "..a change of master, attorney, overseer, or driver—the dispossessing them of their grounds or habitations," and finally, "shifting their residence, particularly from the lowlands to the mountains," as the "ordinary motives" that pushed slaves' to engage in dirt-eating. Dancer, (1801), 175, fn.
[41] Russel Hill, Bridgetown, Barbados to William Fitzherbert, London, May 30, 1791, MS E205, Fitzhebert Papers, Barbados Department of Archives. My italics.
[42] Ibid.

these episodes suggest, might use dirt-eating to effect a return to previous conditions in terms of the provision of food, textiles, or time-off.

The offhand remarks of managerial staff and the silences of absentees receiving narratives of dirt-eating suggests that both groups capitulated to the messages behind it. Gill, for example, narrated dirt-eating on the Turner's Hall estate in terms of long-standing reciprocity. "Lately found it to be a *custom* with your slaves…" he wrote. [43] The vocabulary of rights and obligations pervading the account that Gill provided the Turner's Hall absentee on dirt-eating is one measure of whites' acknowledgement of dirt-eating's status as a bargaining tool. Attorneys and managers who discovered dirt-eating on their estates attempted to discern "from what source the dissatisfaction arises, or whether there be any grounds for it." Their responsiveness to dirt-eating provides powerful evidence of both whites and slaves' acceptance of this particular iteration of dirt-eating's meaning. [44] Absentees' silence in the face of reports of dirt-eating also suggests their acceptance of the different dimensions of one meaning of dirt-eating being hammered out on West Indian estates: as a mutually intelligible language of protest, a means by which slaves subtly communicated their complaints, and, as a caution to overseers and managers who might ignore slaves' protests or allow too much time to pass in rectifying them. For Africans newly introduced to plantation slavery and creole slaves familiar with the logistics of white managerial surveillance, then, dirt-eating was neither a direct means of confrontation with slaveholders' power nor a passive response to the plantation complex but something in between. Dirt-eating elided, in the short term, both

[43] Ibid
[44] Dancer, (1801), 175.

death and punishment and, in the context of day-to-day interactions with managerial staff, communicated slaves' resistance to a range of different living and working conditions.

Jamaica's African and Afro-Caribbean slaves assigned sacral, therapeutic, and economic meaning to different sites on an estate, which might function as burial grounds, sources of healing, and objects of comfort. Slaves ritually employed the earth in these different locations to arbitrate truth, administer justice, provide solace, and treat ailments. The supernatural significance that ancestral lands and burial sites held in enslaved people's moral and material lives, in particular, freighted some types of dirt-eating with sacral meaning. Grave-dirt—the physical synecdoche materializing the sacral and moral authority of the dead in a ritual object that was mobile, tactile, and edible—featured prominently in the juridical rituals enslaved people used to uncover deceit and rectify past wrongs. When enslaved people visited gravesites and ancestral properties to access the power of their ancestors, whom they called upon for security from harm and for the protection of inheritance rights, grave-dirt, "a material ingredient in their solemn oaths," often figured in the rituals performed to obtain these ends.[45] Because of grave-dirt's direct connection to the spirits of ancestors, it made visible what the perpetrators of wrong attempted to conceal and hide. Grave-dirt, for example, figured prominently in the rituals that Obeah specialists used when administering poison trials.[46] The importance

[45] Vincent Brown, *The Reaper's Garden: Death and Power in the World of Atlantic Slavery* (Cambridge: Harvard University Press, 2008), 121. The importance of grave-dirt in oaths that was taken from the burial site of a kin-relation is observed in Bryant Edwards, *The History, Civil and Commercial of the British Colonies in the West Indies* (London, 1793), 67. Indeed, unredeemed wrongs between the dead and the living were believed to direct the course of the funeral procession, see for example Griffith Hughes, *The Natural History of Barbados* (London, 1750), 15, fn. 19.

[46] In the British West Indies, "Obeah," functioned as a catch-all legal term, instantiated in law in 1760 to denigrate, simplify, and criminalize what was a complex spiritual and ritual authority that slaves employed for a variety of purposes including spiritual healing, the identification of lost property, protection, vindication, justice, and the creation and cure of ailments. On debates about the meaning of Obeah and its criminalization: Diana Paton, "Obeah Acts: Producing and Policing the Boundaries of Religion in the

Africans as well as creole slaves attached to burial grounds and family plots—where they believed ancestral spirits lingered—made local elders' institutional memory significant when determining the provenance of the grave-dirt used in what was for all purposes a legal ceremony. Drinking a mixture composed of water, grave-dirt, and the sacral power of ancestors' spirits, the enslaved person on trial acknowledged that the reaction of his or her body to the mixture would manifest the veracity of his or her claims before the ritual specialist and witnesses in attendance.[47] The sudden illness of one who had taken the oath and another had accused of malice identified the oath-taker's guilt.

Independent of the grave-dirt around which judicial rituals were organized, slaves also sometimes consumed lethal amounts of dirt, as both slaves and whites reported, because of the grief that one developed when one learned that one had been cursed by an Obeah practitioner. When a ritual (obeah) specialist cursed an individual, as many enslaved people believed and whites reported, the accursed were driven to consume lethal quantities of dirt. After performing the curse, the Obeah specialist made it known to "his fellow blacks that *Obi* is set for the thief." When the perpetrator of a crime, one Jamaican bystander testified, received the "dreadful news," that a curse had been set for him, "his

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Caribbean, *Small Axe,* 13 (2009): 1-18, 4. See also idem, "Witchcraft, Law, and Atlantic Slavery," *William and Mary Quarterly,* 69 (2012): 235-264; Joseph S. Murphy, *Working the Spirit: Ceremonies of the African Diaspora,* (1994), 114-130. J.S. Handler and K.M. Bilby, "Slave Medicine and Obeah in Barbados, Circa 1650 to 1834," *New West Indian Guide,* 74 (2000): 57-90; idem, *Enacting Power: The Criminalization of Obeah in the Anglophone Caribbean, 1760-2011* (Kingston, Jamaica: University of the West Indies Press, 2012); idem, "Notes and Documents: On the Early Use and Origin of the term 'Obeah" in Barbados and the Anglophone Caribbean," *Slavery and Abolition*, 22 (2010):87-100. In Jerome Handler, "Slave Medicine and Obeah in Barbados, Circa 1650 to 1834," *New West Indian Guide,* 74 (2000): 57-90. For a useful discussion of European witchcraft that has implications how historians might conceptualize Obeah as practices and discourses that Africans used to countermand destructive capitalist incursions into traditional moral economies see Ralph A. Austin, "The Moral Economy of Witchcraft: An Essay in Comparative History," in Jean Comaroff and John Comaroff, eds. *Modernity and its Malcontents: Ritual and Power in Postcolonial Africa* (Chicago: University of Chicago Press, 1993), 89-110.

[47] Long also noted the importance of ingesting grave-dirt as part of Obeah oaths and trials. The individual being questioned, Long reported, "drinks up the residue of the mixture, and may therefore said to literally swallow the oath." Edward Long, *The History of Jamaica*, Vol. 2 (London, 1774), 423.

terrified imagination begins to work." [48] Upon hearing that she or he was the target of a curse, the mark would " fall into a decline, under the incessant horror of impending calamities." A slave's lethal appetite for large amounts of earth, signaled that an Obeah practitioner had privately set a curse at the behest of a client. "Dirt, or any other unwholesome substance become his [the object's] only food, he contracts a morbid habit of body, and gradually sinks into the grave." [49] The morbid desire for large amounts of dirt not only indicated the presence of a curse, it might also, when lethal, manifest guilt among the accused. "Sleep, appetite, and cheerfulness forsake him," one narrator of Obeah curses explained, "his strength decays, his disturbed imagination is haunted without respite, his features wear the gloom of despondency." [50] An individual's insatiable appetite for dirt thus revealed that he or she had wronged kin or individuals living in proximity. To white onlookers, it also signaled that an obeah practitioner was working in the vicinity.

The centrality of grave-dirt and dirt-eating in cultural practices that allowed for justice and vengeance to occur with some procedural regularity in African and Afro-creole plantation communities suggests a new way to interpret instances when individual slaves repudiated white warnings about dirt-eating's lethality. In 1790, for example, a

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[48] "A. No. 22, 23, 24, 25, 26," in Lambert, ed., *HCSP* vol. 69, 216-17; The Reports of the Lords echoed what naturalist Griffith Hughes had observed in his *Natural History of Barbados* (London, 1750) "Obeah negroes, these being a sort of physician and conjurers who can, as they believe, not only fascinated them but cure them when they are bewitched by others. And if once a negroe believes he is bewitched, the notion is strongly riveted in his mind, that medicines seldom availing he usually lingers till death puts an end to his fears," 16.

[49] A. No. 22, 23, 24, 25, 26," in Lambert, ed., *HCSP* vol. 69, 216-17.

[50] "A. No. 22, 23, 24, 25, 26," in Lambert, ed., *HCSP* vol. 69, 216-17; The Reports of the Lords echoed what naturalist Griffith Hughes had observed in his *Natural History of Barbados* (London, 1750) "Obeah negroes, these being a sort of physician and conjurers who can, as they believe, not only fascinated them but cure them when they are bewitched by others. And if once a negroe believes he is bewitched, the notion is strongly riveted in his mind, that medicines seldom availing he usually lingers till death puts an end to his fears," 16.

new slave was brought to the Turner's Hall plantation in Barbados. The overseer Gill was alarmed when the slave had begun to, in his view, consume lethal amounts of dirt. Gill warned the unnamed slave that he would soon die if he continued. Laughing, the slave replied that "he had hurd dirt would kill proper, but believed nothing of it, for that he had eaten enough to kill the devl." [51] Such denials of dirt-eating's potential to harm on the part of an accused slave may be less a rejection of European medical ideas than the defendant's claim of innocence within the arena of enslaved peoples' legal judgment.

Some of the enslaved people of eighteenth-century Jamaica consumed certain types of clayed earth for reasons that contemporary sociologists and physiologists might explain. In order to compensate for a range of nutritional deficiencies brought about by parasitic diseases, social stressors, and arduous work, individuals and groups in equatorial Africa and the Southern portions of the United States have, in the recent past, sought out and consumed clayed earth dense in mineral nutrients.[52] Retroactively applying contemporary medical science to what we know about the provisioning and work routines of African and creole slaves in the eighteenth-century British West Indies suggests that in all likelihood, nutritional deficiencies that were the product of overwork, hookworms, and the absence of mineral-rich foodstuffs often drove enslaved people to consume clayed soils. The soil they ate may have countermanded the aches and pains that were most likely brought only chronic malnutrition.

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[51] He died shortly thereafter, from, as Gill argued in his letter to the estate's absentee, from dirt-eating. Russel Hill Bridgetown, Barbados to (William Fitzherbert, London), May 30, 1791, E205, Fitzhebert Papers, Barbados Department of Archives.

[52] It is now widely recognized by medical practitioners, geographers, and sociologists that geophagism is a culturally-informed and generationally-transmitted response to physiological imperatives for magnesium, potassium, copper, and zinc. John M. Hunter, "Geophagy in Africa and the United States: A Culture-Nutrition Hypothesis," *Geographical Review,* 63 (April, 1973): 170-195.

A close reading of attorneys' and absentees' epistolary correspondence reveals many slaves held ideas about and pursued the medical merits of certain types of soil. The slave trader and Jamaican planter Simon Taylor observed that many slaves, "if they can possibly get at it use a sort of whitish loom which allays" the "constant acid in their stomachs." Taylor momentarily empathized with the physiological necessity that brought about this urge. His sympathy reached its limits, however, when he perceived geophagy to be a negative force upon Golden Grove's workforce. The "whitish loom," Taylor warned, "allays the acid but instantly cloaks them." [53] Leveraging this therapeutic potential depended on the presence of skilled slaves who could scour Jamaica's pathways for the *Aboo* earth that contained these therapeutic properties. "In Jamaica they prefer what is gathered from the beds of rivers, as more free by its dilution from the intermixture of other earths." Access to this type of soil depended upon the presence of slaves, possibly recent African migrants, who could the identify a deposit of marle within the horizontal layers of strata that Jamaica's rivulets, roads, and floodplains revealed as they carved up the island's terrain. "It exists wheresoever a vein of this species of earth happens to be discovered by any negro whose experience enables him to distinguish it," Long reported.[54] Historical documents suggest that enslaved people used dirt-eating to cope with stomach pains and contemporary medical science confirms the anti-acidic effects of some soils.

Managerial staff in Jamaica occasionally viewed dirt-eating as the symptom of a legitimate illness. Whites attributed the ailment to slaves' exposure to high humidity or to

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[53] Simon Taylor, Kingston to Chaloner Arcedekne May 7, 1789; 3A/1789/, Vanneck MS.
[54] No. 2, *Dirt-Eating,"* in "Report of the Lords of Trade on the Slave Trade, 1789, Part 1," in Sheila Lambert, ed., Vol. 69, *HCSP,* 281.

rapid changes in the temperature. In these instances, planters and managerial staff focused on ameliorating the environment.[55] According to Thomas Dancer, "a planter…on a certain estate in St. Mary's," experienced, "a great annual loss of negroes," to the " malady of dirt-eating," which he attributed to bad air on the estate. He addressed the problem by moving "the negro houses, which had a bleak exposure." "The negroes," Dancer reported, "grew healthy and were no longer subject to this complaint."[56] Noxious vapors arising from a particular microclimate could also drive dirt-eating. The Kingston surgeon William Chamberlaine thought this theory credible enough to purchase a ship and erect a floating hospital for chronic dirt-eaters in Kingston's harbor. The overseers who sent habitual dirt-eaters to Chamberlaine's must have agreed that a change of air in combination with fresh fish, and lack of access to earthy substances would, as Chamberlaine boasted, eradicate cravings for non-nutritious substances.[57]

Perceptions about the acculturation of the enslaved patient largely determined how managers and planters diagnosed and classified different instances of dirt-eating as either disorders arising from an environmental cause or habits specific to the individual. Dirt-eating often went down in record as a disorder (with a direct origin in the environmental factors such as malnourishment and climate as opposed to a cultural habit or an emotional disturbance) and was treated as such when it was observed in creole and

[55] If dirt-eating was "merely the effect of a vitiated taste," the antislavery writer James Stewart hypothesized, "perhaps such strictness seconded by an attention to supply them with the most wholesome and savory food may have its effect." James Stewart, *An Account of Jamaica and Its Inhabitants by a Gentleman Long Resident in the West Indies,* second edition (Kingston, 1809), 193.
[56] Dancer (1801), 178, fn.
[57] On Chamberlaine's floating slave hospital see, John Williamson, *Medical and Miscellaneous Observations, Relative to the West India Islands*, Vol. 1 (Edinburgh, 1817), 267. For Chambelaine's work as a plantation surgeon see Chamberlaine, *A Practical Treatise on the Efficacy and Safety of Stizolobium, or Cowhage (the Dolichos Pruiens of Linnaeus) Internally Administered in Diseases Occassioned by Worms* (London, 1784), 50.

older (acculturated) African patients. The criteria that informed the Dominican plantation surgeon Jonathan Troup's diagnosis of dirt-eating as either a habit or a symptom of a stomach disorder provide an explicit example that is similar to how plantation management in Jamaica arrived at their designations. Within the span of a single month, for example, Troup reported that he treated a case of *mal d' estomach* [sic] and wrote separately about hearing of a different slave's predilection for dirt-eating.

In early July of 1789 Troup was "called to see an old woman at Woodbridge Estate, who had got a little ipecca and it did not work and mal d' estomach and cold sweats followed."[58] Troup prescribed a dose of Tartar Emetic, wine, water, balsam caprivi."[59] Troup returned the next day and reported that "the old woman at Woodbridge with mal stomach better." As Troup's description conveys, even prior to his arrival on the Woodbridge Estate, managerial assessments of the patient's character and the cause of her disorder were made. Troup had been called to assist the elderly slave. When he showed up, Troup was informed that his patient had "got a little ipecca." This piece of information assisted Troup in constructing a causal theory that explained why his patient craved dirt, (her dirt-eating was driven out of a need to assuage the pains caused by her ingestion of the violent emetic). The manager's initial assessment thus shaped how Troup interpreted the patient's case. The biographical tidbit that the manager relayed to Troup upon his arrival also prompted Troup to classify the elderly patient's dirt-eating as a disorder, (mal d'stomach) in his surgeon's journal. As Troup's inscription conveys, the

[58] Ipecacuanha is a species of flowering plant indigenous to Central America and Brazil that practitioners in the Anglophone Caribbean and North America (among many other places) used to cure fevers and induce vomiting. See case of elderly female patient in July 13, 1789 in Journal of Jonathan Troup, MS 2070, University of Aberdeen, Special Collections, Aberdeen, Scotland, (hereafter Troup Journal).
[59] July 14, 1789, Troup Journal.

elderly patient's disordered stomach and her appetite for dirt had been set off by the ipecacuanha she ingested.[60]

Managerial staff were much less likely to categorize dirt-eating as a symptom of an involuntary illness when it occurred among African slaves. A little over two weeks after treating the elderly slave for mal de stomach, Troup revisited the Bath estate and noted that he had heard about a "new negro," named Antigua who ate "the earth like bread….which brought on a diarrhea." Thus even prior to encountering them, the status of the two slaves, namely their degrees of acculturation and submission, informed the overseer's assessment of what had caused their dirt-eating, and the information Troup received about them. Troup's records, like others, show that biographical details could sort dirt-eating into two separate categories of the same illness.

The relative acculturation of the enslaved dirt-eater also determined how managerial staff dealt with and deterred dirt-eating. Jonathan Troup named the elder woman's case mal de stomach [sic] and treated with stomach related medicines. Antigua's case of dirt-eating, in contrast, Troup inscribed as an undesirable behavior. It therefore fell under the purview of Mr. Kempf, the overseer on the Woodbridge Estate, rather than Troup, the plantation surgeon. Treating Antigua's desire for dirt as a habit rather than a symptom, Kempf vowed to dismember Antigua's corpse as an example to other slaves on the estate. "If he [Antigua] dies," Troup wrote, "Mr. Kemp is to put his head on a pole for an example to others."[61] In the highly fraught context of plantation

[60] Troup did not record how she had acquired the ippecauhana, whether she had been forced to take it, consumed it on accident, or deliberately.

[61] July 29, 1789 Troup Journal. My interpretation of this entry suggests that Troup did not treat Antigua for dirt-eating and that Troup recorded Antigua's situation in his journal not as a medical case but an observation on the possibilities for how Anglophone planters could corral the undesirable behaviors of Africans in bondage.

slavery, where assessments of the severity of illness and the discipline of behavior overlapped and informed one another, fear of unacculturated African slaves could lead to draconian punishments that desecrated the bodies of the dead.[62]

Geography converged with the identity of the patient to determine the stridency of white assessments of dirt-eating, especially their willingness to attribute awareness of its lethality to slaves. Most white overseers and plantation owners in Jamaica contended that enslaved Africans in particular understood the lethality of dirt-eating, and resorted to it, whites claimed, in order to hasten their own self-destruction so that they might "return to their own country."[63] "A great proportion of the new negroes who go upon sugar plantations," the Jamaican overseer William Fitzmaurice testified in Parliament, "constantly told me [Fitzmaurice] they preferred dying to living." The African slaves on the receiving end of the overseer's ministrations were not pacified by food and threats. Although Fitzmaurice "fed [the new slaves] well," and "remonstrated with them," his efforts met with no response. In the space of one year, the overseer lost "a dozen new negroes by dirt-eating."[64] Some slaves undoubtedly used dirt-eating to hasten their deaths. This type of dirt-eating undoubtedly had a spiritual component: for African immigrants newly arrived upon Jamaica's plantations; the consumption of dirt sped up the reunification with the dead.

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[62] The ways in which planters made plantation hot-houses (hospitals) places of discomfort in order to deter slaves from feigning illness and to compel sick slaves to work is discussed in Justin Roberts, *Slavery and the Enlightenment in the British Atlantic, 1750-1807* (Cambridge: Cambridge University Press, 2013), 161-167.

[63] Hunter, 249.

[64] Testimony of William Fitzmaurice, 9 March 1791 in "Minutes of the Evidence Taken in a Report Before a Committee of the House of Assembly, being a Select Committee Appointed to Take the Examination of Witnesses Respecting the African Trade," Vol. 82, *HCSP*, 229. For Fitzmaurice's appointments to the Orange and Eden Estates in St. James Parish see the same, p.223.

An ocean's distance brought challenges to Fitzmaurice's formulation. Observers in London questioned whether African and creole slaves in Jamaica were leveraging dirt-eating's potential toxicity against managerial staff. The Select Committee formed from members of the House of Parliament to investigate the conditions on West Indian plantations prodded Fitzmaurice about enslaved peoples' motivations. "Though they [slaves] *may* know it to be injurious to their health, have you [Fitzmaurice] any reason to believe that they do it with the direct intention to destroy themselves?"[65] Tasked with investigating causes of slave mortality on plantations, the MPs remained less wed to the argument that slaves ate dirt knowing that it would kill them than the white Jamaicans they interviewed.

II. Dirt-Eating outside Jamaica

Residents of the Greater Caribbean shared Jamaicans' vision of what the term dirt-eating described—the insatiable and unhealthy appetite among plantation slaves and, in some places, poor whites for dirt—but were in conflict over its causes. Whether dirt-eating referred to the symptom of a disorder, a habit, or a custom—varied as one moved between regions in British plantation America. In the lesser Antillean Islands, residents used the term dirt-eating interchangeably with the French *Mal de Stomac* and stomach-evil whereas the term *Pica* prevailed in Carolina Lowcountry. Mal de Stomac and Pica indicated an ontologically-distinct disorder that prevailed among malnourished and overworked plantation slaves, of which the consumption of dirt was but one symptom. Lowcountry residents additionally argued that Pica afflicted poor whites as well as plantation slaves. Both perpetual malnourishment and/or ongoing exposure to dangerous

[65] Ibid., 229, my italics.

miasmas could produce the ailment of Pica. The predominance of the term *mal de stomach* in the correspondence and testimony of managerial staff located outside of Jamaica, it seems fair to say, was more than a linguistic variance. These geographic differences in terms expressed an alternative managerial logic, one that framed dirt-eating as disorder rather than a conscious habit, a malady brought about by arduous work routines and food scarcities among plantation slave populations.

Managerial staff traced *Mal de Stomach* to episodes of overwork, poor nutrition, and exposure. Such an explanation evidences the development of managerial theories of causation rooted in the exigencies of sugar cultivation. Charles Spooner Esq., who worked as an attorney for the absentee Samuel Cary and oversaw Cary's "Simon" plantation in Grenada observed that crop time was particularly hard on slaves' constitutions and a major cause of *mal de stomach*. "In about a month after crop is off many negroes come into the hospital with mal de stomach & swelled legs, occasioned by being worked night and day in crop and exposed to colds and kept up in crop time by hot liquor and canes."[66] Slaves flooded the sick house as soon as harvest operations ceased, Spooner explained. Spooner speculated that periodic upticks in cases of *mal de stomac* that he witnessed on the plantation was connected to the seasonality of slaves' work routines. During three-month spans occurring between January and July, the block of time devoted to the harvest of cane and its manufacture into rum and sugar, the pace and length of hours that slaves were expected to work reached its apex. The frequency of *mal de stomach* among slaves during this period, Spooner claimed, could be traced back to the extended hours slaves were forced to work during the harvest.

[66] Charles Spooner Esq. to Samuel Cary, 10 June 1780, Grenada in Cary Letterbook 1778-1782, 10 MS. N-1997, Samuel Cary Papers, Massachusetts Historical Society, Boston, Mass., (hereafter Cary MS).

Vernacular theories of mal de stomac drew a determinative relationship between its onset and the reduction of slaves' provision grounds and caloric resources. During the harvest, slaves' work extended through Saturday nights into Sunday mornings and afternoons, a time obligation that effectively consumed the "day off" field slaves customarily received so that they could work the provision grounds upon which they subsisted.[67] Waxing and waning according to the undulations of sugar production, mal de stomac, according to Spooner's logic, reached its height in the month following the end of the harvest. At the close of crop season slaves, Spooner wrote, "feel a want which cannot be made up by their ground, not having had time or spirits to put them in order."[68] Far from indicting the entire plantation system, Spooner and other overseers could acknowledge the role that hunger, starvation, and exposure brought about in generating mal de stomach; such explanations limited critique to seasonal rather than perpetual features of sugar cultivation in the Caribbean.

It was not an unreasonable theory. The frequency of mal de stomac Spooner observed in the month following the end of the harvest may have been prompted from the combination of the nutritional vacuity of slaves' diet during the harvest, a diet comprised mostly of sucrose, and the diminished levels of food harvested from provision grounds in the months following. With the harvest complete and the provision grounds bare, slaves likely turned to dirt-eating out of necessity. Dirt-eating allowed slaves to countermand

[67] During this period the working days of field hands extended well beyond sunset as they were forced to work in shifts at night and join the estate's boilers, clarifiers, and distillers in feeding canes to the mill. These additional night shifts were in addition to the day labor required of field hands who cut canes and transported them to boiling houses from sunrise to sunset Monday through Saturday. For more on the seasonality of the rigor of plantation slaves' work routines see Justin Roberts, *Slavery and the Enlightenment in the British Atlantic, 1750-1807* (Cambridge: Cambridge University Press, 2013), 120-122.

[68] Charles Spooner Esq. to Samuel Cary, 10 June 1780, Cary MS.

the reduced intake of essential nutrients they had experienced during the harvest, when their diets were comprised of calories derived almost entirely from sucrose. [69]

The classification of dirt-eating in the Greater Caribbean at the hands of urban practitioners was part of a broader pattern that entailed the renaming of different ailments so as to distinguish them from one another, a process that that occurred in the second half of the eighteenth century. In capturing and solidifying an illness's telltale symptoms and its cluster of causes, practitioners brought previously unknown ailments into view as distinctive ontological entities and began to distinguish diseases from one another. As we saw in chapter three, the preponderance of novel, elusive, and ephemeral disorders prevalent among plantation populations and poor whites in the Caribbean created an epistemological problem that medical men in the region solved by grouping symptoms and causes together. It was a problem that was particularly vexing in the Caribbean where practitioners and laypeople alike grappled with whether heat changed the presentation of ailments or was responsible for the creation of entirely new disorders.

When the yellow fever theorists Colin Chisholm and George Davidson in Grenada, as well as the Antiguan surgeon James Adair turned to study dirt-eating, they proposed a new term for the phenomenon that Spooner referred to as mal de stomac and

[69] Although contemporaries and modern scholars contend that slaves were healthiest during the harvest due to the augmentation of their daily caloric intake, it is important to call attention to the fact that the bulk of the calories slaves consumed during the harvest were derived from the sucrose in the canes and in rum distilled from sugar cane plants. Spooner's and other managers' theories positing a relationship between overwork, poor nutrition, and excessive exposure among slaves and the appearance of mal de stomach on their estates during the harvest, the season when slaves' received the largest amount of calories during the year, suggest we revisit the functionality of hot-house (plantation hospital) admissions and caloric allowances as rubric to gauge "health" among plantation slave populations. Do hot-house admissions for example, really show how slaves' health was influenced by the seasonality of their work routines? Or do they reflect the moment when slaves felt fairly safe from the threat of the whip (which increased during the harvest season) to seek treatment in the plantation hospital? See Roberts' problematic use of hot-house admissions as a measure of slave "health" and its relationship to work in *Slavery and the Enlightenment in the British Atlantic, 1750-1807* (Cambridge: Cambridge University Press, 2013), 170-71.

others called pica or dirt-eating. "There is a disease to which the negroes," Davidson wrote, "and particularly those lately imported, are much subject.*"*[70] "It is named by us," the budding Caribbean nosologist Davidson continued, "*Mal D'Estomac* [sic] or *Cachexia Africana;* and, from a constant symptom which attends it, *dirt-eating* by some."[71] Davidson included the vernacular terms "mal d'estomac," and "dirt-eating" in his description, in order to stage the interpretive chasm between the malady practitioners studied, *Cachexia Africana*, and the major symptoms (dirt-eating and stomach ache) that laypeople mistook for the disorder itself.

In order to prove that Cachexia Africana was in fact a distinctive sub-species, Chisholm and Davidson sought out the constitutional similarities among those who sickened with *Cachexia Africana* and identified the physiological features (predisposing causes) that had made these patients more susceptible to the disorder than others who had not taken ill with it.[72] "A fondness for solitude, sadness, grief and despondency," constituted for Chisholm a major "cause and effect," of *Cachexia Africana*. "Negroes also," Chisholm wrote, "who have been some time in the country are subject to it, but not so frequently as among the former [recently imported slaves]."[73] Davidson's term, *Cachexia Africana,* which would be subsequently employed by other practitioners in the

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[70] Colin Chisholm, "An Account of the Cachexia Africana," *The London Medical Journal,* 2 (1799): 171-173, 173.
[71] Ibid, 171.
[72] Chisholm's primary experiences with *Cachexia Africana* occurred in 1790 when he supervised a gang of slaves engaged in clearing a marsh for the reception of sugar cane plants, and the experience gave him insights into *Cachexia Africana's* environmental causes. "The diet," of the slaves he managed, "was chiefly composed of vegetable food." As he plodded along in his case study, Chisholm listed conditions specific to his own experience that were also nearly common on estates throughout the Caribbean. "They had been employed, immediately before the appearance of the disease in question in clearing the surface of the marsh, and in holing land for the reception of cane plants." "Like all other negroes in similar situations," he finished, "they were much given to the destructive habit of eating a species of pipe clay, very abundant in Grenada." Colin Chisholm, "A Short Account of the Epidemic Polypus at Grenada, in 1790," *Annals of Medicine for the Year 1800,* 5 (Edinburgh: Bell and Bradfute, 1801): 407-414, 407.
[73] Colin Chisholm, "An Account of the Cachexia Africana," *The London Medical Journal*, 2 (1799): 171.

lesser Antillean islands, made the susceptibility of recently arrived Africans to Cachexia Africana a definitive feature of this disorder.[74]

The strategy both the practitioners in the Greater Caribbean employed was to identify and group the emotional, dietetic, environmental conditions of those who had sickened with Cachexia Africana so that they could understand why these collections of people were more susceptible to it than others. The preponderance of Cachexia Africana among recent African migrants alerted the physicians to the underlying physiological features shared by most if not all of the victims of the disorder. The grief and melancholy produced in new African immigrants assimilating to plantation slavery as well as those suffering under the hardship and rigors of violent plantation regimes were, the practitioners argued, one of two predisposing causes that had made these groups more susceptible to the disorder. The melancholy attendant under slavery, in other words, functioned as a shared environmental feature that all those vulnerable to *Cachexia Africana* experienced.[75]

Cachexia Africana, medical men theorized, was a cousin of Scurvy. Both disorders shared the same predisposing causes. As was well known among medical men

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[74] Davidson cut and pasted the term from an earlier and less-well known article describing new materia medica coming out the Caribbean. The article appeared in a lay periodical and was authored by the Antiguan practitioner James Adair. Note that Adair's description also included other terms for geophagism (*Anasarca Americana*) that Adair borrowed from the medical taxonomist François Boissier de Sauvages. "It is [Sinapi a stimulant medicine] peculiarly useful in the morbid disposition, which I all *Cachexia Africana,* but which Sauvage denominates *Anasarca Americana*…a most frequent and predisposition to disease among slaves," James Adair, "Article 2. A Few Hints on Particular Articles of the Materia Medica, Communicated in a Letter to Dr. Duncan, from Antigua, by Dr. James Adair, now Physician at Bath," *The English Review, or An Abstract of English and Foreign Literature*, 7 (1786): 437-439, quote p. 437.

[75] The malady, Collins wrote, was "produced by another cause, which induces laxity of the solids, so as to render them incapable of working up the blood to such a degree of consistence, as is necessary for the well being of the machine." "The power of the passions," Collins continued, "in producing that effect, is very well known; for we find that negroes laboring under any great depression of the mind, from the rigorous treatment of their master, or from any other cause, addict themselves singularly to the eating of dirt." David Collins, *Practical Rules for the Management and Medical Treatment of negro Slaves in the Sugar Colonies* (London, 1803), 241.

throughout the Caribbean in the wake of Thomas Trotter's seminal work on *Scurvy,* the exhaustion, enervation, and despondence experienced by laboring mariners predisposed many Tars to Scurvy. "How much predisposition," Trotter wrote, "such as depressing passions of the mind concurs in the production of scurvy…" Sailors with "the active kind" of mind "have the happiest influence in prevention."[76] Prolonged confinement on transatlantic vessels also destroyed the constitutions of enslaved cargo: "The predisposition to scurvy" Trotter noted, also occurred among enslaved transports, whose susceptibility "must also be increased by the hardships they experience from their confinement in the hold of a ship, which no doubt, will keep alive many of these gloomy reflections inseparable from a state of captivity."[77] "Persons of what is called the melancholic temperament," in sum, "are peculiarly predisposed to Scurvy, whenever exposed to its exciting causes."[78] Maritime labor and the horrors of the middle passage created predispositions among sailors *and* enslaved captives for scurvy. In their weakened state, these groups became vulnerable to scurvy's exciting causes.

In searching for the features that distinguished *Cachexia Africana* from other maladies of the stomach, practitioners throughout the Greater Caribbean fixated on the exciting causes. Exciting causes were just what their name implied; they functioned as catalysts that activated the dormant elements of the patients' physiologies and instigated an ailment's external presentation in the form of symptoms. Exciting causes combined with the predisposing causes (a patient's or populations' unique physiology) to activate a disorder. Davidson, Chisholm, Collins, and Thomas looked to the environmental

[76] Thomas Trotter, *Observations on the Scurvy, with a Review on the Opinions lately advanced on that Disease, and a new theory defended* (London, 1793), 62.
[77] Ibid., 62.
[78] Ibid., 41.

conditions that the victims had also experienced in common and which might provide information on *Cachexia Africana's* exciting causes.

Chisholm and Davidson, along with others singled out the travesties visited upon enslaved people living under poor managerial supervision and named these experiences as the "exciting causes" that activated Cachexia Africana. The disorder, Davidson wrote "occurs in those who have, generally speaking, been badly cloathed, ill fed, and lodged, and those whose constitutions have been worn out by hard labor." These exciting causes, prevalent on large plantations, combined with the former predisposing element of a sad and distressed mind to create the malady. "The mind, partaking of the suffering of the body, is affected with nostalgia, brooding over their ill treatment, separated forever from their friends and relations, and doomed to suffer without daring to complain."[79] The exciting causes of Cachexia Africana, prevailed among enslaved people who were subjected to vegetable diets and exposure, conditions that galvanized the disorder which manifested in the symptoms of a debilitated stomach and an insatiable appetite for chalky earth.

Sailors functioned as the perfect point of comparison for theorists of *Cachexia Africana* because the infamously bad working conditions of Tars and that of plantation

[79] George Davidson, "Article VI: Account of the Cachexia Africana; a disease incidental to Negro Slaves lately imported into the West-Indies" *The Medical Repository of Original Essays and Intelligence, Relative to Physic, Surgery, Chemistry,* 2 (1799): 282-284. It is unclear whether Davidson or Chisholm wrote this article is unclear. Davidson's name does not appear as the author of this article in the *Medical Repository* but it is attributed to him by the editors who write "by the author of the previous," a term that referenced an article, on yellow fever, that appeared in the same volume of *The Medical Repository,* and physically preceded the dirt-eating piece and which was authored by Davidson. Subsequently, the text of Davidson's article on dirt-eating was reprinted in *The London Medical Journal*, 2 (1799):171- 173 and attributed by that journal's editors to Colin Chisholm. See Colin Chisholm, "An Account of the Cachexia Africana," *The London Medical Journal*, 2 (1799): 173. For the purposes of clarity, I refer to Davidson when referring to the article that appeared in *The Medical Repository,* and only reference the same text that appeared in *The London Medical Journal* but attributed to Chisholm when it is necessary to refer to that journal's editorial amendments.

slaves perfectly mirrored one another. What made Cachexia Africana distinctive from other disorders of the stomach that prevailed among laborers in the West Indies who experienced similarly rough working and living conditions was dietary differences in those afflicted with Cachexia Africana and those who sickened with scurvy. The mariners and enslaved cargo who broke teeth on brittle tack at sea came under scrutiny from practitioners studying Cachexia Africana because of seamen's susceptibility to Scurvy, the most infamous disorder of the stomach. Both Cachexia Africana and Scurvy, Davidson and Chisholm theorized, shared the same predisposing and exciting causes.

The imbalanced diets that excited or galvanized the onset of both Scurvy and Cachexia Africana left distinctive chemical signatures in the constitutions of the groups predisposed to them. The impoverished state of blood, characteristic of Cachexia Africana, David Collins wrote, was a condition "commonly arising from a mean and unsubstantial diet, not, as hath been generally imagined, from the eating of dirt."[80] Scurvy, similarly, was born out of a deficiency of "vital air," which the protein-rich and vegetable-poor diets of mariners created. [81] [82] Chisholm and Davidson invoked the chemical deficiencies characteristic in Scurvy victims to position *Cachexia Africana* as Scurvy's chemical inverse. The diets of slaves caused *Cachexia Africana* because slaves' diets consisted almost entirely of vegetable carbohydrates. Unlike scurvy, which was a

[80] David Collins, *Practical Rules for the Management and Medical Treatment of Negro Slaves in the Sugar Colonies*, (London, 1803), 342.
[81] Vital air was characterized by high levels of oxygen. Vegetables and fruits were comprised of vital air, Trotter explained, channeling the pneumatic chemist Joseph Priestely, because they were acidic. "What communicates acidity to" nature's productions such as fruit and some vegetables was "vital air, or the dephlogisticated air of Doctor Priestly…." Thomas Trotter, *Observations on the Scurvy, with a Review on the Opinions lately advanced on that Disease, and a new theory defended* (London, 1793), 140.
[82] Since then," Trotter continued, "it is agreed that vital air, or what is more properly called oxygene [sic], is a component principal of acid fruits, we have reason to conclude, that this is the quality which they restore to the human body in scurvy." Trotter, *Observations on the Scurvy*, 140.

malady characterized by a lack of oxygen, *Cachexia Africana* produced a "deficiency of carbon" in its victims.[83] The excessive vegetables in slaves' diets created a lack of carbon in their blood. The slight variations in the exciting cause, or the diets, also created a distinctive chemical imbalance in the blood of the two patient populations.

The chemical deficiencies characteristic of Cachexia Africana, in turn, suggested its method of cure. "It is remarkable that negroes," Davidson wrote, "subject to this disease, have been much benefited by living in a low situation, near marshes, which quickly prove fatal to whites." The chemical composition of Grenada's marshes explained their dramatic therapeutic effects upon patients suffering from Cachexia Africana" "perhaps the hydro-carbonic air may act as a cordial—it is perhaps the nervous ether itself."[84] In *Cachexia Africana* Chisholm wrote, "we have not the same putrid diathesis to obviate [as in scurvy] and the stomach has already been much debilitated by a poor vapid vegetable diet, that it requires more stimulant plain animal food, wine, warm clothing, and gentle treatment."[85]

Practitioners outside Jamaica located the origins of *Cachexia Africana* in the combination of a depressed state of mind and a poor diet, essentially updating vernacular explanations of mal de stomach through the framework of disease taxonomy and pneumatic chemistry. This account also explained Cachexia Africana's epidemic proportions. The predominance of gang labor on sugar estates, in which slaves were organized into groups of 30 members of more and assigned to specific tasks, ensured that

[83] "The same defect of oxygen prevails in both diseases," Davidson explained. Davidson, "Article VI: Account of the Cachexia Africana; a disease incidental to Negro Slaves lately imported into the West-Indies," 284.
[84] Ibid
[85] Ibid

large groups of slaves simultaneously experienced the environmental causes that made them vulnerable to Cachexia Africana. The phenomenon did not, Collins explained, move from one estate to another, "as hath been generally imagined, from the eating of dirt." The consumption of dirt, "which, though it may aggravate the evil, and if habitually persisted in, may render it altogether incurable, is," Collins wrote, "seldom the primary cause of it." Rather, slaves who were subjected to the environmental conditions of "rigorous treatment of their master," developed the predisposing cause that Collins characterized as "a great depression of mind." On many estates, poor treatment or excessive discipline went hand in hand with a "mean and unsubstantial diet," comprised mostly of vegetables and chronically insufficient clothing—the exciting causes—which, in turn, caused the depressed slaves predisposed to Cachexia Africana to develop the weak pulse, chemical imbalances in the blood, and adulterated digestive tract that were characteristic of the disorder.[86]

Practitioners throughout the Greater Caribbean who engaged in the project of medically reframing dirt-eating did not overturn laypeople's causal frameworks but instead renamed maladies and scientifically explained the physiologies that made one susceptible them.

As much as any other occupational group, practitioners drew from if not directly participated in the distinctive cultures of violence in British plantation America that organized black and white social relations characterized by demographic flux and

[86] These included the "impoverished state of blood," as well as the "laxity of the solids," palipitations of the heart, and the impeded digestion and "morbid acidity." For "impoverished state of blood," "laxity of the solids," see David Collins, *Practical Rules for the Management and Medical Treatment of Negro Slaves in the Sugar Colonies*, (London, 1803), 342; "vitiated state of gastric juice," "impeded digestion," "morbid acidity," in George Davidson, "An Account of the Cachexia Africana; a Disease incidental to Negro Slaves Lately Imported into the West Indies" *The Medical Repository,* 2 (1799): 282-84, 283.

instability. Distinctive relationships between blacks and whites in lesser Antillean Islands (Grenada, Dominica, Antigua, Nevis, St. Vincent), which achieved a greater creolization of the slave population, created less tension between whites and blacks. These relations formed an important context for the reformulation from mal de stomac, a disease that laypeople claimed was rooted in dietary imbalances, as *Cachexia Africana* in the lesser Antillean islands. For all of the new medical distinctions this new nomenclature of *Cachexia Africana* implied, the etiology this term carried (*Cachexia Africana's* predisposing, and exciting causes) fundamentally borrowed from explanations prominent among ordinary folk.

The medical nomenclature, *Cachexia Africana*, did, however, signal that practitioners had finally pinpointed the distinctive origins of this mal de stomac. "The knowledge of the cause of any disease," Edward Long summarized, "conducts to us the method of cure."[87] Slaveowners and many laypeople concurred with medical men both that the cure of a disorder could only come through an understanding of its essential identity, which in turn, derived from the detection of its etiology. When practitioners in the lesser Antilles renamed mal de stomach Cachexia Africana, they signaled that what plagued plantation slaves was actually a regional and population-specific iteration of the more general disorder of the stomach *Cachexia.* Cachexia Africana constituted a specific sub-species of Cachexia because of its specific predisposing and exciting causes, which gave it its diagnostic profile. What made Cachexia Africana distinctive from the more general and well-known stomach disorder Cachexia was it cause in dietary deficiencies.

[87] Edward Long, *The History of Jamaica*, 2 (1774), 436. Long expressed this idea in reference to the maladies that he believed caused high rates of neo-natal mortality on Jamaica's estates.

Indeed, its distinctiveness from Cachexia was Cachexia Africana's status as dietary deficiency disease.

There were of course similarities. Like ordinary Cachexia, *Cachexia Africana* originated as a dysfunction of the stomach. Yet Cachexia Africana's exciting and predisposing causes as well as its geographic prevalence were distinctive. *Cachexia Africana* sprung from the environmental determinant of an imbalanced diet, and possibly, exposure to noxious miasmas combined with melancholy. It also prevailed in torrid rather than temperate climates. The term *Cachexia Africana* finally, indicated the group particularly susceptible to this disorder; in adding *Africana* to the general stomach disorder nomenclature *Cachexia,* practitioners indicated that *Cachexia Africana* plagued African and people of African descent almost exclusively, which in the Caribbean context, meant plantation slaves.

III. Pathologizing Dirt-Eating in Jamaica

Under the pens of Jamaican medical men, *dirt-eating* became an official designation for a habit of eating large amounts of insalubrious earths. Jamaicans' definition hardened various vernacular explanations of dirt-eating's cause into a habit, rather than a disorder. If one indulged dirt-eating at length, this habit inevitably led to other types of sickness such as dropsy. Jamaican practitioners rarely conceptualized dirt-eating as a disorder; their insistence on the term "dirt-eating," indicates their reliance on both ordinary Jamaicans' terminology, and, in part, laypeoples' causal frameworks. "It appears to be more of a disorder of the mind than of the body, and shews [sic] itself by a very uncommon depravity in eating dirt," the British Army physician and Jamaican John

Hunter opened his section on dirt-eating.[88] The physician Thomas Dancer officially referred to the phenomenon as dirt-eating, but acknowledged other nomenclatures, "(whence the French call *Mal d'Estomac*)." In listing "dirt-eating" as a separate sub-heading in his chapter on "disorders of the stomach," where dirt-eating received its own runninghead for his ten-page discussion of the subject, Dancer expressed his commitment to this nomenclature.[89] The plantation practitioner, John Williamson, in turn, referred first to "dirt-eating" in his subsection on the subject, but also acknowledged that elsewhere it was referred to as "mal d'estomac," and "stomach evil."[90] When Jamaican practitioners made "dirt-eating," their chosen term, they affirmed the proximity between the vernacular conceptions of its origins and their own medical interpretations.

Jamaicans depicted symptoms that were nearly identical to those described by their contemporaries in Grenada, St. Vincent, Antigua, and Nevis. "The negroes who eat dirt," Thomas Dancer wrote, "first complain of pain in the stomach…then breathlessness on the least motion, attended with visible pulsation of the carotids or the arteries of the neck." "They next become bloated," Dancer continued, "their nails and palms of their hands become white, and their lips, gums, etc quite pallid shewing the want of red globules in the blood."[91] Dirt-eating led to the disorder known as dropsy. Hunter found it easier to swap in the symptoms of dropsy in lieu of describing from scratch the consequences of dirt-eating. [92] "When the patients are oppressed by that condition,

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[88] John Hunter, *Observations on the Diseases of the Army in Jamaica,* 248.
[89] Dancer, *The Medical Assistant* (1801), 172.
[90] John Williamson, *Medical and Miscellaneous Observations, Relative to the West India Islands*, 2 (1817), 261.
[91] Dancer, *The Medical Assistant* (1801), 172.
[92] "When slaves began to eat dirt in large numbers they soon developed symptoms that "are those of a dropsy; the appetite fails, the face becomes bloated, the extremities swell, and effusions of water take place under the skin and in all the cavities of the body," Hunter, *Observations on the Diseases of the Army in Jamaica,* 249.

appetite declines, a puffed appearance takes place over the body, particularly in the face; the eyes are partially obscured, from effusion in the cellular substance," Williamson explained. "In the more advanced progress of the disorder," Williamson wrote, palpitations of the heart appeared "under the *cartilage en si formis*, or in the stomach," and a "throbbing of the *aorta descendens.*" Laypeople need not understand Williamson's obtuse medical terminology to ascertain the prevalence of dirt-eating on an estate. Overseers would notice this immediately because "when an attempt to stand or walk is made, they [slaves' afflicted with dirt-eating] are obliged to lay down, from giddiness and weakness." The "increasing debility," Williamson continued, "makes rapid progress, until this distressing affection terminates most commonly in death."[93] Whereas practitioners outside Jamaica positioned these symptoms described above as the result of *Cachexia Africana* and included the consumption of dirt as one its symptoms*,* Jamaicans' formulations, as we shall see, made clear that these symptoms were the direct consequence of the habit of dirt-eating.

Hunter, Dancer, and Williamson conceptualized dirt-eating as an addiction or a habit. Hunter and Williamson positioned dirt-eating as a mental abnormality unique to the Greater Caribbean's poorest sort: plantation slaves. Their discussions of dirt-eating appeared in sections singling out and describing "affections of the mind," common among plantation slaves.[94] "No means of preventing the horrid practice of *eating dirt,* as it is called, nor any method of remedying the destructive effects of it, have hitherto been discovered," Hunter wrote.[95] Enslaved people "have a predilection for particular types of

[93] Williamson, *Medical and Miscellaneous Observations, Relative to the West India Islands*, 2, 263.
[94] Ibid, 139.
[95] Hunter, 250, italics in original.

earth at first." But when dirt-eating reached its nadir, enslaved people would, Hunter argued, "eat plaster from the walls or dust collected from the floor when they can come at no other." They "filled their mouths," with a white clay and "allow it to dissolve gradually, and express as much satisfaction from it, as the greatest lover of tobacco could do."[96] "Dirt-eaters," Hunter finished his initial description, "can seldom or ever be corrected of this unnatural practice, for their attachment to it is greater than even that of dram-drinkers to their pernicious liquor."[97] Hunter's and Williamson's descriptions make clear they believed dirt-eating developed from cultural practices that ran deep in the uncivilized minds of enslaved people.

Dancer's definition bridged the cultural gaps between enslaved people and whites by stressing the similarities between dirt-eating to other social habits common to Europeans. His formulation, however, positioned dirt-eating within the order of personal affectations that Britons found contemptuous when undertaken in excess. Dirt-eaters demonstrate, he wrote, "as much curiosity and nicety in the kind of earth they yam [a play on enslaved people's diets], as snuff-takers or smokers in the kind of tobacco." Dancer's framework not only reaffirmed the Jamaican stance that it was a habit, his formulation of enslaved dirt-eaters also dredged up the legal justification that denied slaves full legal personalities on the basis of their powerlessness to control their emotions and passions. "As people who use snuff or tobacco are apt," he continued, "when laboring under disappointment or misfortune to be guilty of excess….so may negroes, who have contracted the habit from caprice or imitation, find the same sort of solace in an

[96] Ibid, 248.
[97] Ibid, 248. Hunter's description mirrored that of the Nevis practitioner Robert Thomas, *Medical Advice to the Inhabitants of Warm Climates* (London, 1790), 207 who wrote of "…negroes who *addict* [my italics] themselves to this practice…"

indulgence which, when within limits, was innocent, but which from excess may become pernicious and destructive."[98] Dancer's configuration of dirt-eating with other habits of sociability liable to abuse nicely captures the moral and disciplinary elements undergirding Dancer's formulation of dirt-eating as a custom rather than a disease.

Jamaican practitioners knew dirt-eating had already come under scrutiny from metropolitan critics of West Indian slavery. Pitching knowledge claims on terrain well rutted by antislavery critique, Jamaican practitioners tried to refute explanations, that antislavery activists could use to indict the rigors of slave labor or neglect attendant on West Indian estates.[99] "It is supposed that a diseased state of stomach may give rise to the depraved appetite," Hunter imperiously stated, "but of this there is no good evidence." The practitioners "proved" that dirt-eating was a habit by showing that cures that had been historically effective in alleviating a range of stomach-related disorders did not deter dirt-eating. "Stomachic medicines, magnesia, or other absorbents, or a good and full diet," had never, Hunter wrote, "done much good."[100] Williamson argued for the necessity of alleviating the "mental disease," that prompted dirt-eating among new African immigrants eager to engage in self-murder.[101] "It is in vain to try the power of medicine," he wrote. In claiming that dirt-eating was impervious to traditional methods of cure, Jamaican practitioners denied that slaves' "maladies, and this one in particular, are

[98] Dancer, *The Medical Assistant*, 174.
[99] Jamaica's potent economic and political power in metropolitan Britain and the Anglophone Caribbean had acculturated ordinary practitioners resident in the island (as well as other occupational groups) with the arguments and types of evidence (as well as the ones requiring elision) that morally sustained Jamaica's plantation labor system. See Ryden, *West Indian Slavery and British Abolition, 1783-1807* (Cambridge: Cambridge University Press, 2009), 36-37.
[100] "A deficiency of food, and hard labor, though it may contribute to bring on the disease, will not occasion it, where there is not dissatisfaction or discontent of mind," wrote Hunter, 250. Thomas Dancer, *The Medical Assistant* (1801), 175.
[101] Williamson, *Medical and Miscellaneous Observations, Relative to the West India Islands*, Vol. 1 (Edinburgh, 1817), 140.

owing to bad treatment and scarcity of food," an analytical move that attempted to safeguard dirt-eating from the hands of abolitionists. [102]

In an effort to counter baying antislavery critics, Dancer and Williamson posited an etiological distinction between two types of dirt-eating. The first type of dirt-eating was a relative of the Edinburgh nosologist William Cullen's *Chlorosis* and the French nosologist William Boissier de Sauvages *Pica* or *Malacia.* This type of dirt-eating, was, in this formulation, the symptom of a pre-existing disease. Chlorosis or Pica, were the body's reflexive response to an episodic internal disturbance. "The disease of dirt-eating among negroes," Dancer wrote, "is precisely the *Chlorosis* or Green Sickness of women."[103] Dirt-eating, Williamson wrote, occurs "in the female as well as in the male, in the former, it is remarked that the menstrual evacuation is also obstructed."[104] "Other authors, [Sauvages]," Dancer explained, "describe a disease called *Pica* or *Malacia* in all respects similar, occurring in the male sex, but more particularly among boys."[105] In all three instances and in spite of the patients' residence in geographically disparate locales, patients afflicted with either *Chlorosis, Pica,* or dirt-eating exhibited an unexplainable "appetite for substances not eatable."[106] "The depraved appetite," characteristic in all three disorders, arose Dancer concluded, from " a state of debility in the stomach, which renders it insensible to the ordinary stimuli and lays the foundation for these unnatural

[102] Dancer, (1801), 178.
[103]Cullen had identified *Chlorosis* by the symptoms of "indigestion, or an appetite for substances not eatable, pale color, oedematous, or dropsical swelling, palipatations of the heart, and obstructions of the menses," that he had observed in female patients who were at the age of menstruation. Dr. Cullen," Dancer explained in a footnote, "has shewn how atony in the uterus may be transferred to other parts of the system particularly the stomach, and so calls all the symptoms of Chlorosis." Dancer, (1801),171, 172*n.*
[104] Williamson, *Medical and Miscellaneous Observations, Relative to the West India Islands*, 1:111.
[105] Dancer, (1801), 171.
[106] Ibid, 172.

propensities."[107] "Diseases which so strongly resemble each other in their symptoms, must, it is presumed, have a common cause" Dancer proclaimed.[108]

Dancer further universalized this response to episodic stomach upsets by showing its frequency across species, invoking the behavior of sickly livestock and canines. "We see dogs physicking themselves with grass; and poultry, when denied the use of gravel, picking their own feathers." To these examples he added the behavior of children. "White children, both here and in Europe, as well as negroes here," Dancer continued, "are, at a certain age, prone to the eating of dirt." These interracial comparisons naturalized the responses of all three human groups as well as their animal analogues to disordered stomachs. "Whether they are led to it by instinct, similar to that which directs other animals to the use of extraneous and indigestible substances, I shall not venture to determine."[109] In his final example, Dancer dredged up the bizarre cravings of pregnant women, a timeworn example of the bizarre physiological configurations of the human body. In the accompanying footnote Dancer cited the Latin proverb: " A woman with child not to be refused anything."[110] In grafting his medical explanations to natural histories pulled from the human and animal world, Dancer framed the first type of dirt-eating as a morally acceptable albeit unusual urge. Hardening the boundary between dirt-eating as a chronic habit and an occasional digestive impairment allowed Jamaicans' the analytical space to account for the widespread existence of dirt-eating on the island's plantations without indicting starvation, exposure, or overwork as the environmental factors that drove slaves to consume dirt.

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[107] Ibid,173.
[108] Ibid,174.
[109] Dancer (1801),172.
[110] Ibid,172 *n.*

Some instances of dirt-eating were not, Dancer and Williamson maintained, sporadic, but had originated in the aerial maladies inherent in certain atmospheres or in the physiological complications that arose when slaves were forcibly relocated to a new microclimate. When slaves were moved from one estate to another and had trouble adjusting to new elevations and humidity thresholds, this rapid movement often brought on the disorder of dirt-eating. "On mountain settlements," Williamson surmised, "where negroes are much exposed to cold and wet, they sometimes begin to appear uncomfortable." When "a temperature foreign to that which contributes either to health or their enjoyments, without any hope of a change," was present, it created the "depression of spirits, languor, listlessness, disposition to extreme indolence," and subsequent slide into dirt-eating.[111] Dancer held a much dimmer view, one that again blamed enslaved people for their appetite for dirt. Certain microclimates did not produce an ailment that led to a craving for dirt, but merely abound in the types of dirt that slaves found palatable. The fact that dirt-eating prevailed in St. Andrews but was scarcely seen in Port-Royal, owed, " to there being none of the earth they are fond of in the former situation."[112] His theory reestablished the primary cause of dirt-eating in one's predilections rather than one's environment.

What the Jamaicans had done was to bifurcate dirt-eating into two types: socially acceptable isolated incidents brought on by natural causes (sometimes atmospheric maladies that were difficult to identify), and dirt-eating undertaken in large numbers generated by a perverse appetite or disordered state of mind. "On many estates," Hunter wrote, "half the number of deaths, on a moderate computation, are owing to this

[111] Williamson, *Medical and Miscellaneous Observations, Relative to the West India Islands*, 2: 263.
[112] Dancer (1801), 171.

cause."[113] "That disorder," of the mind, Williamson wrote, "will find its way among negroes sometimes, and sweep away a great proportion of the gang."[114] Another type of "dirt-eating," Dancer wrote was "endemical [sic], affecting great numbers at the same time," often "when a major part, or a great numbers of negroes on a plantation, or new negroes on landing take to dirt-eating."[115] In these cases, he continued, "it would be ridiculous to consider the disease as the effect of any constitutional circumstances….a deficiency of food, and hard labor, though it may contribute to bring on the disease, will not occasion it where there is not dissatisfaction or discontent of mind."[116] Dancer's language in his second explanation struck down deficiencies of food and hard labor as exciting causes even as he acknowledged the availability of these interpretations. We must," Dancer explained in his account of this second type "search for the cause elsewhere, and we shall find it now where but in the passions."[117] The bifurcation of dirt-eating into two types enabled the Jamaican practitioners to explain how dirt-eating, as a practice or habit, "spread," in the same manner as other forms of contagion.

Obeah figured among Jamaican practitioners as the common environmental factor to which many slaves were exposed. The frequency and extent of Obeah, explained the spread of the mental affliction that, in turn, resulted in compulsive dirt-eating.[118] "Obeah,

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[113] Hunter, 250.
[114] Williamson, 2: 261.
[115] Dancer (1801),175.
[116] Ibid, 175.
[117] Dancer (1801), 175.
[118] Obeah's role in prompting dirt-eating was also described by David Collins, however, the St. Vincent practitioner minimized the extent to which Obeah prompted dirt-eating and framed it as a minor and easily manageable factor. See David Collins, *Practical Rules for the Management and Medical Treatment of Negro Slaves in the Sugar Colonies*, (London, 1803), 347-48. "I have made no mention of sorcery, as a cause of this disorder, though the idea of its influence, which often prevails with negroes, may have an exceeding bad effect upon them. As reason can effect nothing in such cases, artifice should be employed to remove the impression."

or the terror of witchcraft," Dancer argued, "is much more frequent cause than any." Seized by the curse of an Obeah practitioner, slaves, Dancer wrote, " daily devour, with the most voracious avidity, large quantities of earth, at first of one kind only, afterwards of every kind indiscriminately, and quickly fall into that deplorable state of Cachexy before described, from which they are not, by any means yet known, to be recovered."[119] "The superstitiously depressing consequences of threats from a negro of weight and influence on an estate," was, Williamson explained, the only universal factor that could explain the consistent spread of dirt-eating in situations "where the establishments of negroes are extremely comfortable." On such plantations, "we have rather to fear the lurking and concealed practices of Obi," where, Williamson implied, overseers and planters could not be held to blame.[120] Dancer, Hunter, and Williamson all pointed to as the stress that Obeah created as the one consistent force in the lives of enslaved people that could explain the alarming celerity with which dirt-eating spread across estates and parishes.

Managerial interpretations of Obeah informed Jamaicans practitioners' theories. "An experienced practitioner informs me," Dancer relayed in a footnote, " that on an estate which he attended, seventy negroes died of this complaint in a very short space of time, till at last it was discovered, through the information of one who was christened, that there was an Obeah woman on the property: the terror of whom had occasioned this melancholy catastrophe."[121] When Countess, an enslaved woman on the estate upon which Williamson worked, sickened with the symptoms associated with dirt-eating,

[119] Dancer (1801),176.
[120] Williamson, 2: 262.
[121] Dancer (1801), *n.* 175.

Williamson argued it stemmed from her irrational fear of the "Obi laid for her," by her husband Oliver Cromwell after the two had quarreled. "That destructive complaint," Williamson concluded, "owes its prevalence universally to affectations of the mind."[122] The reliance of practitioners upon the managerial staff for information on the social and mental effects of Obeah testifies to the ways in which the medicalization of dirt-eating in Jamaica was informed by the disciplinary and extractive context in which it was observed by the island's overseers and attorneys.

The fact that African immigrants and other groups imperfectly acculturated to plantation slavery frequently succumbed to either Obeah or a desire for self-harm explained, for Jamaican practitioners, the prominence of dirt-eating among newly arrived slaves from Africa. "Such is the nature or force of this insanity (for in this view I consider it) that an alteration in the system of management, or a compliance with their own demands and wishes, will not in all cases put a stop to it," Hunter concluded.[123] The prevalence of dirt-eating observed among "packed negro gangs, or those formed from Marshall's sales, and collected in small numbers from different places" Williamson traced to "a resolute determination," among this specific group, for suicide. "Negroes anticipate," he explained, that they will, upon death removing them from that country, be restored to their native land and enjoy their friends' society in a future state." Wine, "nourishment of every description, and kind attentions, were given," but the gang, Williamson reported, "candidly confessed that death was their wish, and not to survive their companions." "Depression of mind," soon set in and a number of individuals in the

[122] Williamson, 1:139.
[123] Hunter, 250.

group resorted to dirt-eating, in order to "produce disease, and at length, death."[124] These, in the minds of whites, irrational mental stressors motivated the move to dirt-eating among these groups independent of additional environmental factors.

In detailing which African groups were most liable to "mental affectations," practitioners lent further credibility to their etiologies of dirt-eating by aligning their medical theories with the ideas that Jamaica's overseers and attorneys had assimilated as part of the process of seasoned purchasers of African slaves. Readers would see the connection between the propensity of certain ethnicities for bad habits and their willingness to self-destruct with their tendency to eat dirt. "Angola negroes," Williamson summarized countless other planation management texts, "do not seem to possess that strength of mind or body which Eboes or Coromantees do." "Mungolas are of still more tender constitutions," Williamson surmised, than slaves imported from Angola, "and can less brook the reverses inseparable from removal to a foreign country." "The Angola negroes," he explained, "are more commonly subject to the *mal de estomac* [sic] than other African nations."[125] Dirt-Eating, Dancer explained, is, "according to Dr. Chamberlaine, (to whom I am indebted for several remarks) much more prevalent since the large importation of Angola negroes."[126] This combination underscored that the origins of the troubling phenomenon lay in the mental weaknesses of African slaves rather than the environmental conditions in which they lived. Practitioners leveraged information on the temperaments of different African groups that Jamaica's slave

[124] Williamson, 1: 93.
[125] Williamson, 1:177.
[126] Dancer was referring to the Jamaican plantation surgeon William Chamberlaine.

merchants circulated to build up the case for dirt-eating as mental affectation to which the particularly meek were subject.

Non-naturals, the factors such as food, clothing, emotions, and environment traditionally held to exert a powerful influence upon the constitution of the patient and his or her susceptibility to illness were, Jamaica's practitioners argued, too inconsistent in the lives of slaves on different estates to be of analytical service in the study of dirt-eating's spread. The absence of uniformity in the provision of adequate woolen linens and oznabrigs, salted herrings and other imported provisions, and harsh punishments among the island's estates, practitioners implied, rendered these external environmental factors inconsistent in the lives of all enslaved dirt-eaters. These factors, as proslavery apologists had argued in Parliament, depended on the creditworthiness of the resident planter or absentee owner of the estate as well as the aptitude or cruelty of a particular overseer. They were also, in turn, subject to change with each crop and hiring of managerial staff. Deficiencies in the Galenic "non-naturals" of sleep, diet, stress, and environment could not explanation the rapid dispersion of dirt-eating among Jamaica's slave populations.

Obeah, practitioners implied, was a much more consistent force in enslaved people's lives than any of the other categories of Galenic non-naturals. The consistency with which enslaved peoples' emotions descended into terror from the signs of an Obeah curse meant that distressed emotions outweighed any of the other environmental conditions—"a change of master, attorney, overseer, or driver, the dispossessing them of their grounds or habitations, shifting their residence, particularly from lowlands to the mountains," that others had proffered as the cause behind dirt-eating epidemics. The reliability of Obeah as a destructive force in the emotional lives of slaves and as a catalyst

for dirt-eating in the folklore of whites made Obeah a suitable explanation. Jamaica's practitioners identified Obeah as the environmental factor that could explain dirt-eating's epidemic sweep.

IV. Dissecting Dirt-Eating

Eager to profit from black misery, plantation surgeons viewed the secrecy and recalcitrance that enslaved patients, wary of European therapeutics, as an impediment to the theorization of plantation maladies. Although they bragged that their study of "negro diseases," would advance medical science by affording practitioners unique opportunities to observe of the effects of climate, work, and malnourishment on the constitutions of enervated patients, "an extensive practice among slaves," did not by any means guarantee comprehensive understanding of their disorders. The humanizing exchange of oral and physical information between enslaved patients and white healers was the most typical means to diagnose illness. Yet it was one that practitioners in the Caribbean resented because, they claimed, this method produced inaccuracies.[127] Practitioners treating plantation slaves, one editor in a metropolitan medical periodical sniffed, "are frequently obliged to draw their information and form their indications from temperamental distinctions, aspect, pulse, and the moral character of the person."[128] "The true nature," of enslaved peoples illnesses, "partly from ignorance, but more from their inclination to imposture," were not as easily and "accurately ascertained as those of white patients," the

[127] Wary of physically draconian and usually ineffective medical cures to which white medical practitioners subjected them, enslaved people often attempted to conceal their disorders and sought solace from African and creole healers working in traditions and with therapeutics that had achieved the consensus of effective through the authority of tradition and time. See for example enslaved peoples' abhorrence of mercurial cures for yaws in Londa Schiebinger, "Experiments with Slave Medicines," in *Human Experimentation in the Eighteenth-Century Atlantic World,* (Forthcoming, 2016).

[128] James Adair, "Article 2. A Few Hints on Particular Articles of Materia Medica, Communicated in a Letter to Dr. Duncan from Antigua, by James Adair, now Physician at Bath," *The English Review, or an Abstract of English and Foreign Literature,* 7 (1786): 437-439, 437.

editor explained.[129] In a context in which white practitioners relied almost completely upon dialogue with enslaved patients to understand and theorize a number of hitherto unknown maladies, the dissections performed on the bodies of enslaved dirt-eaters accrued epistemological weight. The post-mortem analysis on deceased slaves offered practitioners in the Caribbean a leg up on their dismissive metropolitan counterparts. Dissections eliminated the inconvenient elements of taking enslaved patients' vital signs.

Much as practitioners had seized upon and dissected the bodies of deserted sailors, white urban poor, and infantrymen stranded in the Caribbean without families or kin to bury them, practitioners might also wring good, medical men in the Caribbean proclaimed, from the criminal status of many deceased slaves. "Towne, Warren, Hillary, Bisset, Blane, Hunter, Moseley, and Chisholm, and others have written well on the diseases of climate, and certainly have enlightened us to their general nature," the St. Vincent physician David Collins stated. "But," he chastened, extant knowledge of disease and its treatment in the Caribbean was "much more applicable to the conditions of whites, who have all the advantages of good nursing, lodging, and medical attendance, than that of our slaves, who posses none of them, at least in equal degree."[130] The disparity between the pathological knowledge of fevers that medical men had generated and that of plantation maladies was, in Collins' view, a metonym for the deficiencies of contemporary medical science. The unevenness in the pathological analysis of whites and enslaved peoples' disorders also highlighted the failure of practitioners to exploit their

[129] Ibid.

[130] There are many striking variations," the Collins elaborated, "between the temperament, of the whites, and those of the negroes, sufficient to induce a belief of a different organization, which the knife of the anatomist, however, has never been able to detect." David Collins, *Practical Rules for the Management and Medical Treatment of Negro Slaves in the Sugar Colonies* (London, 1803), 231-2.

opportunity to study how maladies proceeded in the extremely underfed, poorly-clothed and overworked. "We are hitherto much in the dark respecting several disorders that are in great measure confined to the negroes in that part of the world," an exasperated John Hunter complained. "A better history of," of the disorders of slaves Hunter proclaimed, "would enlarge our knowledge of pathology, and teach us, I doubt not, many new and interesting facts in the animal economy."[131] As many practitioners coldly acknowledged, the living conditions of plantation slaves were extremely different from those of even poor whites.

Early modern peoples' abhorrence of post-mortem dismemberment stayed the hand of many managerial staff who were, under normal circumstances, unwilling to disrupt and trample upon enslaved peoples' mortuary traditions in the service of medical science.[132] The horror that enslaved people felt on seeing "their bodies being treated in this manner," spanned the gamut from post-mortem beheadings to surgical incision into their remains. Williamson relayed how he had wanted to dissect a young male slave on the Prospect estate in Jamaica who had died from a mysterious fever. "Dissection could have determined," Williamson explained, the internal progress of the man's mysterious illness. Because the man's death was not related in any manner to any other criminal activity, the overseer honored the objections of the deceased's kin and friends and the inquisition did not take place. "No opportunities were permitted of this kind by negroes," Williamson summarized, "at least, it was very rarely they could be persuaded of its propriety."[133]

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[131] Hunter, 244.
[132] Ibid, 250.
[133] Williamson,1:81-82.

Across the West Indies, the dissections that urban practitioners made upon dead dirt-eaters did not expand or complicate as much as visualize their claims about the phenomenon's causes. "From this short account of the disease," the Greanadian Davidson triumphantly wrote towards the end of his article, "you will be prepared for the appearances upon dissection."[134] Davidson detailed the abnormalities *Cachexia Africana* created in the organs that comprised the digestive system.[135] Chisholm grasped, in desperation, at a handful of environmental conditions he believed had caused the dirt-eating that accompanied the case of the epidemic polypus he diagnosed. The slaves he witnessed succumb to dirt-eating lived in houses "built on the hill on the left, chiefly on its slope, and towards the edge of the marsh." A ravine running between their quarters and the mountain opposite them channeled "a continual current of wind of an uncommon degree of coolness," upon their residences. The slaves' diet, consisting of "vegetable food," was not enough to sustain them while they labored "in clearing the surface of the marsh and in holing land for the reception of cane-plants," and compounded the stresses of their habitations. Chisholm initially could not understand what prompted "the destructive habit of eating a species of pipe-clay, very abundant in Grenada," among the slaves he supervised. Chisholm initially struggled to understand the interplay between the symptom of dirt-eating and the specific environmental conditions that created this practice "till dissection instructed me."[136] The dissections to Chisholm revealed the

[134] George Davidson, "Article VI: Account of the Cachexia Africana; a disease incidental to Negro Slaves lately imported into the West-Indies," 284.
[135] The stomach is found much enlarged, and thickened in its coats; the liver sometimes enlarged and schirrous, but always whiter than usual, the gall-bladder sometimes with biliary concretions; the bile never of a healthy appearance, generally thin and watery, and slightly yellow or green; the mesenteric glands indurated and schirrhous." George Davidson, "An Account of the Cachexia Africana; a Disease incidental to Negro Slaves Lately Imported into the West Indies," 284.
[136] Chisholm, "A Short Account of the Epidemic Polypus at Grenada, in 1790," 407.

relationship between his patients' habitations, diets, and levels of exposure and the "extraordinary train of symptoms," he had witnessed.[137] The post-mortem inspection of deceased dirt-eaters confirmed rather than challenged practitioners' hypotheses, opening up the bodies of dead dirt-eaters enabled practitioners to visualize their claims about the phenomenon's causes.

The adulterations Davidson and Chisholm perceived when they opened up the remains of those who had died from *Cachexia Africana* not only confirmed their speculations on the exciting causes of the disorder, what they saw pointed to a method of cure. Davidson counseled dietetics. "From this view of the disease, the pathology and treatment of it, I conceive will be easily understood." "The preparations of iron," Davidson continued, are here found of the most essential service." "Much benefit has also been derived from fermented weak liquors—acescent cane liquor has cured many," he closed his prescriptive section of his article. [138] Dissections affirmed Chisholm's Davidson's and other practitioners' placement of *Cachexia Africana* as, like Scurvy, a disorder of the stomach, a classification that, in turn, called for specific dietetic regimens to facilitate patients' recovery.

Similarly, in Jamaica, dissections bestowed authority on the practitioners to rationalize that it was the activity of dirt-eating that created pathological disturbances in the body of enslaved people, rather than a pre-existing disorder that had given rise to an insatiable appetite for absorbent earths.[139] "In order to ascertain whether they [the masses

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[137] Ibid

[138] The appearances of the different organs of the digestive tract upon dissection had "induced a medical practitioner in a neighboring island to employ mercury, with a view of removing as he supposed, obstructions.." Davidson reported. "But," he cautioned, "a very small quantity of it excited such terrible effects as to oblige him to desist." Davidson, "An Account of the Cachexia Africana; a Disease incidental to Negro Slaves Lately Imported into the West Indies," 283.

[139] Dancer (1801),179.

of earthy matter] were formed before or after death, the body had been opened a few minutes after the patient expired," Hunter explained. "They are no doubt formed," Hunter concluded, "when the motion of the heart becomes feeble and languid, just before death."[140] Williamson confirmed Hunter's speculations. "Dissections have shewn the stomach itself in an exhausted worn-out state, secreting little or not gastric liquor," yet other organs of the body, such as the "heart, lungs, liver, and the other viscera, discovered in general no formed disease." The absence of adulteration throughout other systems of the body confirmed for Williamson dirt-eating was to blame for adulterations in the digestive tract.[141] "Found in some bodies of negroes who died of dirt-eating," Dancer wrote, were "very large concretions of earth, in one a mass that filled the whole colon, weighing 12lbs."[142]

In offering scientific proof that dirt-eating originated as a habit, the dissections also vouchsafed the more draconian measures overseers employed to eradicate dirt-eating among new African immigrants. Dancer advocated interventions that attempted to reconfigure social hierarchy within a slave community when dirt-eating had become widespread.[143] "Every thing should be done," Dancer counseled of dirt-eating, "to render the practice infamous." "An odium," he continued, "should be attached to it, or rather those who can prove themselves descended from families uncontaminated by this

[140] "On examining the body after death, there are frequently found in the colon large concretions of earthy matter, which they have swallowed, lining the cavity of the gut, and almost completely obstructing the passage," Hunter narrated. Hunter, 250.
Williamson, 1:173-4.
[142] Dancer (1801),179.
[143] If dirt-eating was caused by "the influence of magic or superstition, the *obeah* people should be searched form and brought to punishment," Dancer explained. "The bewitched negroes," he elaborated, "should be Christened." Dancer (1801), 177.

abhorred vice should be held in honor." [144] Dancer's advice in fact closely paralleled the shaming techniques that Edward Long and other plantation advice authors advocated. [145] Collins advocated, for example, the use of "very light chain or thin collar encircling their necks, so light as scarcely to incommode them at all," to deal with runaways because "it marks their disgrace." The social stigma of criminality that Dancer's methods generated would similarly, he surmised, compel chronic dirt-eaters to stop this behavior once they internalized it as shameful.[146]

Williamson and Hunter went much further than Dancer and endorsed the post-mortem desecration of dirt-eater's bodies as "cure" for dirt-eating's entrenchment on different estates. "A humane principle," Williamson rationalized, "leads the proprietor to have the head of a negro placed in some prominent situation; and such has been found a salutary mode of deterring the rest from a conduct so destructive." [147] Jamaican practitioners' willingness to blame the habits or culture of enslaved people informed their

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[144] Ibid, 178. The necessity of intervening in slave's social dynamics and using shame and disgrace to discourage dirt-eating was also a strategy that Hunter implicitly endorsed when he scornfully mocked the way that "this practice is common at all ages," or passed on between generations. " Even almost as soon as they leave the breast, the young learning from the old," Hunter wrote. Hunter suggested that by disciplining elders, younger slaves would turn away from dirt-eating. See Hunter, 248. George Davidson was aware of Dancer's experiments with mercury to cure individual instances of mal d'estomac, and, just as likely, Dancer's medical techniques to obviate dirt-eating en masse through draconian social interventions. Davidson, however, did not recommend any of the social techniques that Dancer, Hunter, and other practitioners in the British West Indies endorsed. For Davidson's awareness of Dancer's experiments with mercury see Davidson, "Article VI: Account of the Cachexia Africana; a disease incidental to Negro Slaves lately imported into the West-Indies," 282. For Dancer's encouragement of "country" practitioners to use mercury to cure dirt-eating see Dancer (1801),179-8.

[145] The historian, planter, and Jamaican lobbyist Edward Long counseled managers that "creole blacks," could be "kept in good order, without the whip." The many "artifices to be practiced with greatest success," that Long endorsed included the "degrading them for a while from some employment esteemed among them a post of authority…holding them up to ridicule of their fellow blacks and the like." Shame and ridicule were Long's default strategies. "The force of ridicule….brings upon them the contempting sneers of the other negroes and always turns the edge of their contempt and rage from their master to themselves." Edward Long, *The History of Jamaica,* Vol. 2 (1774), 411-12.

[146] Collins, *Practical Rules for the Management and Medical Treatment of Negro Slaves in the Sugar Colonies*, 207-8.

[147] Williamson 1:93.

support of the psychologically violent techniques managers used to "cure" these groups of dirt-eating. When harsh emetics and corporal punishments failed to deter dirt-eating, its eradication, Hunter wrote, "has been in part accomplished upon some estates, as I have been informed, by cutting off the heads from the dead bodies of those, who have died of this vicious practice."[148] Although we have evidence of the post-mortem dissections of deceased dirt-eaters from both Grenada and Jamaica, this practice perhaps took on a more sinister meaning in Jamaica where the desecration of deceased dirt-eater's bodies occurred with some regularity.

Indeed, the dissections that Jamaican practitioners undertook on slaves who had died from dirt-eating built upon long-established techniques that used the threat of cosmological violence to deter slaves from running away, rebellion, participation in Obeah, and finally, dirt-eating. It is now a commonplace among scholars of British slavery and political violence in the eighteenth-century Atlantic World that the decapitation and public display of rebels' heads in the wake of Tacky's Revolt constituted a form of spiritual terror reserved for the use against the enslaved people of Jamaica.[149] Authorities used a variety of representational strategies to convey the permanent destruction of the supernaturally-powerful bodies power of the revolt's

[148] "What could not be effected by any of the means just mentioned, has been in part accomplished upon some estates, as I have been informed, by cutting off the heads from the dead bodies of those, who have died of this vicious practice." Hunter, 250.

[149] A rare sentence in the eighteenth-century, reserved for those convicted of treason, decapitation occupied a culturally and historically intelligible position in the penal culture of Britons and British colonists. Dismemberment in whatever capacity was a form of punishment that denied the worst class of criminals the possibility of an eternal life. Many remembered that those convicted of participation in the Jacobite rebellion of 1745 were sentenced to be drawn and quartered, disemboweled, and their heads placed upon gateways to deter others. Across the realm, Britons feared and loathed any form of dismemberment. By 1760, in the British Isles, it was considered barbarous to place the heads of rebels and criminals on public display on gateways, a move that denied criminals the possibility of eternal salvation by forcibly preventing the reunification of the principal parts of the criminal's body in the grave. (After 1760, the executioner might cut off the head of the criminal, but it would quickly thereafter join the criminal's body in the coffin). Frank McLynn, *Crime and Punishment in Eighteenth-Century England* (Routledge: London, 2002), 272-4.

leaders.[150] Less noticed by scholars of political violence is the fact that anatomization—another form of dismemberment that was popularly believed among Britons to impede the subject's peaceful passage to the hereafter—was also performed on the bodies of the leaders of Tacky's Revolt as well.[151]

When Dancer, Hunter, and Williamson theorized the beneficial effects of post-mortem dismemberment of enslaved dirt-eaters, they built upon an established Jamaican disciplinary tradition that had been used as dramaturgy for white power in the aftermath of Tacky's Revolt: exemplary anatomical dismemberment of enslaved criminals' corpses would be buttressed by the new medical analysis of their remains.[152] In 1763, it was preternatural survival of Fortune and Kingston, two of the rebels captured in the revolt, against the violence that the Jamaican government inflicted upon them while alive, that gave urgency to the scientific investigation and desecration of their corpses. "Hung alive in irons on a gibet, erected in the parade of the town of Kingston," Fortune and Kingston,

[150] Electrification, when used penetrate the skin of Obeah practitioners with electrical jolts before audiences of enslaved onlookers, did not so much evidence colonists' command over the imperceptible world of supernatural forces as much as it displayed that whites could do little more than effect sensate forms of power using modern machinery. See Jill Casid, " 'His Master's Obi': Machine Magic, Colonial violence, and transculturation," in Nicholas Mirzoeff, ed., *The Visual Culture Reader* (London: Routledge, 1998), 533-545.

[151] As decapitation fell by the wayside in the British Isles as an exemplary means to deter crime, anatomization supplanted it. The Murder Act of 1752 allowed judges to sentence criminals convicted of heinous crimes—pre-planned murder and treason—to hang their already dead bodies in chains. Yet more terrifying for eighteenth-century Britons, the same act strengthened the fear of capital punishment by endowing judges with right to order the dissection of an ordinary criminal's body by surgeons. Frank McLynn, *Crime and Punishment in Eighteenth-Century England* (Routledge: London, 2002), 272-3.

[152] In the wake of Tackey's Revolt, the exhibition of the rebels' and Obeah chief's heads in public spaces throughout Spanish Town, whites believed, functioned to deny in *terrorem,* to enslaved onlookers, the supernaturally-endowed martial prowess of rebels at large. When he was captured, Tacky was hanged and afterwards his head was "brought to Spanish Town, and stuck on a pole on the highway." Edward Long, *The History of Jamaica*, Vol. 2 (1774), 451-2. When white authorities in Jamaica realized that Tacky's head had been surreptitiously removed from the post upon which authorities had placed it, they interpreted this development as confirmation that Africans shared their horror of dismemberment. "Not long after" colonial authorities had raised Tacky's head upon a pole for the entire city to see, the head was "stolen, as was supposed by some of his countrymen, who were unwilling to let it remain exposed in so ignominious a manner." Long, *The History of Jamaica*, Vol. 2 (1774), 458.

two ringleaders of the revolt in St. Mary's Parish, survived their ordeal long after anyone expected them to.[153] Fortune, Long reported, lived seven days, and Kingston, amazingly, survived for nine. In the context in which rebels' martial prowess was reputed to have been enhanced by Obeah magic, the capacity of the two rebels to withstand a grueling physical execution seemed to confirm, before enslaved onlookers, the commanders' preternatural inviolability. It also aroused in Jamaica's authorities the need to deny the rebels' power. On the morning before Kingston died, "he appeared convulsed from head to foot; and *upon being opened, after his decease,* his lungs were found adhering to his back so tightly, that it required some force to disengage them."[154] In dissecting Fortune and Kingston, Jamaica's colonial authorities attempted to crush enslaved onlookers' belief in the potency of the rebels' physicality and as well as the leaders' immunity to violence and punishment. The dissection that Jamaican practitioners performed on enslaved Africans and creoles who had died from dirt-eating had a direct connection to the strategy of dehumanizing the remains of the followers and practitioners of Obeah.

Yet the division of interpretive and extractive labor evident in Dancer and Hunter's writings on the dissections of enslaved dirt-eaters shows us how practitioners attempted to distance themselves from the violence of slavery and instead frame their dissections within the context of dispassionate and objective scientific knowledge-making. Indeed their efforts to gloss over the violence inherent in the careers of the plantation surgeons who supplied them with data from dissections offers an interesting perspective on how the two used dissections to affix their place at the apex of Jamaica's

[153] Long, *The History of Jamaica*, Vol. 2 (1774), 458, fn.
[154] "The murders and outrages," as Long explained, "were thought to justify his cruel punishment inflicted upon them in terrorem to others." Long, *The History of Jamaica*, Vol. 2 (1774), 458, fn.

medical hierarchy and simultaneously safeguard their hands from the dirty disciplinary work that undergirded medical practice on the island's plantations. As urban fever theorists with elite white patrons, Dancer and Hunter relied on the plantation practitioner Thomas Clarke's reports on the dissections of slaves who had died from dirt-eating.[155] Dancer's and Hunter's references to Clarke as "Botanist in the Island of Jamaica," however, elided the fact that Clarke owed the entirety of his income from his earnings as a practitioner serving the estates of the island's planters.[156] The title of "botanist," in effect, subsumed the unsavory elements of Clarke's intellectual work under the mantle of a vocation widely recognized as gentlemanly. Clarke's paid work as a botanist was, in fact, extremely erratic and inconsistent. Acquaintances and members of the Jamaican Colonial Assembly repeatedly fielded complaints from Clarke about the difficulties of surviving on the scanty and irregular salary he received from the Assembly as the Island Botanist.[157] During the War of the American Revolution Clarke reached his limit with a cash-poor Colonial Assembly and, in the words of one acquaintance, "turned planation doctor by which he gets £1000 per an. and dared not look at a plant."[158]

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[155] Hunter, 250; Dancer (1801), 179.

[156] Clarke was nevertheless well respected and known in Jamaica among naturalists. In preparing a second edition of the *History of Jamaica* around 1775, Edward Long wrote in the margins of the text that "there is now a botanist, Dr. Clark at £420 per annum." Long Papers, History of Jamaica MS. Vol. 2, p. 136, Add. Mss 12,404-06, British Library, London. The Jamaican overseer, planter, and amateur naturalist Thomas Thistlewood also mentioned in 1777 a "Mr. Clarke, the botanist," as being in "a continual state of ill health since his arrival." See Thomas Thistlewood to Edward Long, June 17, 1777, Add. Mss 18725a. f. 128-9, British Library. In 1781, the Jamaican Colonial Assembly appointed Clarke Apothecary General in the Island. For Clarke's appointment as Apothecary General see *Douglas and Aikman's Almanack and Register for the Island of Jamaica, calculated for the Year of our Lord 1781* (Kingston, 1781), np, "List of the Arms in Jamaica," American Antiquarian Society, Worcester, MA.

[157] Clarke received his first official appointment as Island Botanist from the Jamaican Colonial Assembly in 1775. In 1785, he solicited and was re-granted this position by the Assembly, which additionally awarded him an appointment as superintendent of the Botanical Garden in Bath, Jamaica. For Clarke's first appointment see John Hope to Sir Joseph Banks, September 4, 1775. Banks Letters, Volume 1, f.52, Kew Gardens Special Collections and Archives; his second appointment is mentioned briefly by Mathew Wallen in his letter, May 6, 1785 to Sir Joseph Banks, Add. Mss 33978, f.11-12, British Library.

[158] Mathew Wallen to Sir Joseph Banks, September 23, 1784. Add. Mss 33977, f. 267, British Library. During peacetime, Clarke returned briefly to botany, but the majority of his income came from his

The dissections of deceased dirt-eaters helped practitioners everywhere visualize what they already claimed to know about dirt-eating. In Jamaica and elsewhere they also augmented and enhanced a longstanding disciplinary tradition that managerial staff inflicted upon deceased dirt-eaters and their surviving relations. As any experienced plantation practitioner knew, dissections complemented managerial strategies of eliminating dirt-eating through spiritual terror, and did so to a much greater degree than any of the other strategies of deterrence medical men endorsed. The disciplinary techniques that managerial staff used to dissuade enslaved people from dirt-eating and that practitioners endorsed complemented the research agendas of Caribbean medical men eager for cadavers to inspect. Indeed, as Dancer, Hunter, Williamson, and Clarke were well aware, coercion, spiritual degradation, and post-mortem dissections were concomitant with the generation of new knowledge of "negro diseases."

Conclusion

On the ground *Cachexia Africana* and dirt-eating might look the same. Yet in their writings medical men distinguished Jamaica's dirt-eating from *Cachexia Africana* on the basis of the two illnesses' causes. Cachexia African was a malady, they argued, brought about by environmental factors such as exposure, malnourishment, and fatigue and were subject to the control and managerial manipulation of overseers. These factors produced a mental predisposition in enslaved people for the disorder, cachexia Africana, which was in turn, activated by malnourishment, overexposure, and fatigue. A telltale symptom of the disorder *Cachexia Africana* was an untoward craving for dirt.

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partnership with the apothecary and druggist William Fyfe and the "hospital for slaves," that the two operated in Kingston, which held upwards of 30 patients at a time, see Clarke's and Fyfe's advertisement in (Kingston) *The Daily Advertiser,* March 22, 1790.

Jamaica's dirt-eating arose, Dancer, Hunter, and Williamson argued, from habits and predilections slaves refused to shed in spite of the demands placed upon them by acculturation. The category of dirt-eating then, referenced a theory of causation that blamed the development of the ailments associated with dirt-eating on the backwards cultural practices of enslaved people. Geographically distinctive groups of practitioners not only saw two different versions of the same illness. They brought dirt-eating and cachexia Africana into view as distinctive entities by attributing the development of the two illnesses to different groups of historical actors: slaves whose untoward habits produced dirt-eating and slaveowners and overseers, whose indifference to the working conditions of plantation populations produced predispositions that caused slaves to sicken with cachexia Africana.

The post-mortem dissections of deceased dirt-eaters served both the methodological needs of medical men in the island *and* the disciplinary activities of white managerial staff, another example of the ways in which the intellectual activities of the island's medical men overlapped with the colony's power structures. The disciplinary activities through which laypeople managed dirt-eating supported practitioners' research practices. Dissections, the gold standard in the methodology of Caribbean medical men augmented managerial tactics that overseers and planters used to dissuade enslaved people from dirt-eating through the use of spiritual terror. Post-mortem dissections took away the human identity of enslaved patients, affirmed the criminality of their bodies as well as the activities that had produced their demise, and attempted to deny to enslaved onlookers the possibility that the dead would meet with happiness in the afterlife. Indeed, practitioners gained opportunities to cut open and examine a handful of deceased dirt-

eaters when they affirmed the etiology of dirt-eating as a habit. In framing dirt-eating's origins in cultural practices, urban physicians like Dancer and Hunter reinforced the vernacular associations that linked dirt-eating to African criminality.

Chapter Five
Torrid-Zone Domestic Medical Advice Books: Re-Vernacularizing and Globalizing Plantation Medicine

Ulcers, the Kingston physician Thomas Dancer explained in 1801, encapsulated the essential characteristics of diseases in the West Indies: their spread was vast and their origins multiple. Then too, the individual sufferer's *habit* or constitution determined their appearance, severity, and violence. "Ulcers are of several kinds," he explained, "and require a very various management, according to the state of the discharge, the constitution and habit of the patient, etc." The influence of the individual patient's body in determining the characteristics of the ulcers and the manner in which they progressed made it difficult if not impossible to identify a treatment that would operate universally. In an ideal world, a practitioner with "more experience in this branch of physic," than Dancer would emerge to identify the role of the environment, diet, and habit in determining the shape of ulcers, to assign a causal weight to each factor, and to identify a treatment that would work universally, irrespective of differences among the ulcer sufferers' constitution. Such a "gentleman" would "merit the thanks of the public, and planters in particular, whose interests are so deeply concerned," Dancer proclaimed.[1] "The number of negroes that are frequently laid up (more especially on certain estates) with ulcers of various descriptions, occasions a great de-escalation of labor." Ulcers' tendency to incapacitate slaves made their study a matter of vital importance to the economic life of Jamaica.

[1] Thomas Dancer, *The Medical Assistant, or The Jamaica Practice of Physic* (Kingston, Alexander Aikman, 1801), 292.

At the dawn of the nineteenth century, Dancer had worked for two decades to cement his reputation in Jamaica and throughout the Atlantic world as a knowledgeable scientific figure. A reputation for the "peevishness of [his] disposition, arising from a conception that his abilities had been under-rated by the world," also accompanied his local celebrity, however.[2] Many in Kingston and the island acknowledged his abilities. But Dancer's tendency to bludgeon his peers and patients with his erudition made for a poor bedside manner. His surly personality may have bolstered his scientific reputation; fellow practitioners in Jamaica perhaps attributed the physician's proclivity for minutia and his propensity to quarrel with his devotion to precision in thinking and analysis. Taking up the distanced position as an author rather than that of a bedside consultant likely allowed Dancer to profit from his extensive knowledge. From the distance of a friendly author Dancer could translate the erudite medical theory of fevers and other tropical maladies and their mode of treatment to lay audiences. By the time he sat down to write (1801) *The Medical Assistant*, Dancer had made a name for himself as a highly visible and well-respected practitioner among medical faculties in Jamaica, the Greater Caribbean, North America, and the British Isles.

In *The Medical Assistant, or The Jamaica Practice of Physic* (1801) Dancer materialized as the sage who wrangled the complexities of ulcers and other diseases on behalf of the lay readerships he envisioned consulting his work. To explain the cause-and-effect relationship between the patient's physiology (a product of her habits over a long period) and the external inputs of diet, miasma, intemperance, and hygiene in

[2] David Grant, *An Exposition of the Conduct and Character of Thomas Dancer, M.D. By David Grant, M.D.* (Jamaica: 1805), 5.

producing ulcers of great severity, Dancer selected plantation slaves and British infantrymen as paradigmatic body types illustrative of this dynamic. "Habit" for most early modern Europeans referred practices that created a person's physiology. A person's physiology or constitution was something that accrued: it was the cumulative product of one's daily practices in diet, rest, work, and hygiene. "The tendency of every scratch or bruise in negroes to run into a sordid and ill conditioned ulcer, must be the effect of a particular habit of body," he began. To make explicit the relationship between a slaves' and infantrymen's "habits of body," and their greater susceptibility to ulcers than other working populations Dancer spelled it out.

Dancer maintained that the most significant determinant of the "habits" of slaves was their diets. Dancer summarized the contents of plantation slaves' diets as consisting of animal meats of bad quality "*viz* salted herrings and salt fish, which are not infrequently in a semi-putrid state," and an excessive quantity of "crude vegetables." He was not incorrect in describing the diets of slaves as such. But when he attributed the poor quality of the meats slaves consumed to gustatory preferences, his account revealed the ways in which Dancer emptied the etiology of slaves' ulcers of its capacity to be used as a critique of the plantation complex. Slaves were not forced to eat rotting fish and beef because of the cheapness or indebtedness of slaveowners but because they "prefer such food, and they therefore sell their own fresh pork and poultry, to buy these execrable articles; *viz* shads, salt fish, half rotten salt pork, etc."[3] Dancer tellingly absolved slaveowners and overseers from creating the lopsided dietary regimens that had produced slaves' compromised physiologies and made them more vulnerable to ulcers.

[3] Dancer, *The Medical Assistant* (1801), 292.

Dancer's decision to use soldiers and slaves as representative medical subjects traded on readers' assumptions about infantrymen's diets (which also consisted of preserved meats and were held to be excessively salty) and intemperance. Soldiers were "as well as negroes…very subject to ulcers, and partly from the same causes…but more so from the inordinate use of rum," Dancer explained. Yet his explanation of ulcers' etiology among soldiers in the West Indian Garrison also absolved officers and military establishment's role in failing to discipline or adequately feed the infantrymen under their command. Instead Dancer assigned the most weight to the West Indian environment. "Independent of these causes, however, climate may have a considerable influence, by the relaxation it induces, which is unfavorable to the healthy action in the vessels."[4] The infantrymen's constant exposure to the torrid environment made it difficult for their bodies to initiate the natural processes, which operated normally in more temperate climes, that sped up the process of closing and repairing wounds. The "febrile miasmata" that prevailed in the vicinity of soldiers barracks in Port Royal and Fort Augusta in Jamaica, Dancer surmised, quoting John Hunter, the famous Jamaican military surgeon and fever author, "may frequently be the cause of ulcers."[5] The circumspection Dancer exercised in describing the causal origins of ulcers among infantrymen and slaves encapsulates the political orientation and intellectual ambitions of *The Medical Assistant*. It was a wildly popular domestic medical advice text that applied the taxonomic insights generated in the study of yellow fever—especially this literature's emphasis on etiology as means to taxonomically distinguish between different ailments—to the analysis of the causes of disorders that plagued plantation populations. *The Medical Assistant* was one of

[4] Ibid., 293.
[5] Ibid., 293.

several domestic medical advice texts that simultaneously buttressed the political economy of slavery by creating politically neutral etiologies of plantation diseases while also offering up replicable methods to treat them.

The fierce debates over the identity of yellow fever documented in chapter three had, in the last quarter of the eighteenth-century, unleashed critiques of extant systems of nosology—the university-based systems for identifying and placing disorders within a classificatory system of disease. Yet West-Indian iterations of these disputes over the identity and treatment of yellow fever had also prompted practitioners and a range of ordinary folk throughout the region not only to take a more empirical rather than a humoral approach to the conceptualization of illness but to scrutinize the different causes behind the ailments that seemed to prevail among plantation populations.[6] Indeed, on West Indian plantations and on large estates in the Carolina Lowcountry, middling whites as well as enslaved savants and patients began to observe the behavior, causes, and symptoms that characterized a range of epidemic disorders that had nothing to do with fevers but which nevertheless ravaged plantation populations with equal degrees of violence. Ailments such as neonatal tetanus, yaws, dirt-eating, and ulcers plagued enslaved people on large estates.[7] These diseases often reached "epidemic" status yet did

[6] On the role of imperial practitioners in prompting British medicine to take a more clinical and empirical approach to the study of illness see Mark Harrison, *Medicine in an Age of Commerce and Empire, Britain and its Tropical Colonies, 1660-1830* (Oxford: Oxford University Press, 2011), 1-28; Othmar Keel, " Was Anatomical & Tissue Pathology a Product of the Paris Clinical School or not?" *Clio Medica,* 50 (1991): 117-186; idem, "The Politics of Health & the Institutionalization of Clinical Practices in Europe in the second half of the Eighteenth Century," in W.F. Bynum & Roy Porter eds., *William Hunter and the Eighteenth Century Medical World* (Cambridge: Cambridge University Press, 1985), 205-256; Catherine Kelly, *War and the Militarization of British Army Medicine, 1793-1830* (London: Pickering and Chatto, 2011), 1-10.

[7] Neonatal tetanus produced high infant mortality rates and yaws made social outcasts of its victims among the enslaved community, prematurely disabling yaws patients in the process.

not elicit imperial concerns on a scale similar to fevers.[8] Yet they dramatically altered the lives of the enslaved sufferers who experienced them. Their capacity to interrupt slaves' work routines and reproductive capacities made them active areas of inquiry and discussion among the owners and white managerial hierarchy responsible for organizing slave populations on large estates. Individuals who had witnessed, treated, cared for, and experienced these ailments formulated new ideas about the aerial environment, nutrition, and toil affected the presentation of these different diseases as well as their modes of treatment.

And yet we know very little about how the observations that laypeople on plantations made about the ailments they witnessed became codified as recognized diseases in the Caribbean iterations of university-based medicine. The recent literature on naval and military medicine posits that British military medical officers stationed in tropical theaters of warfare leveraged their experiences in garrisons and on ships to challenge the humoral view of medicine that prevailed among medical elites in London,

[8] A number of illnesses observed simultaneously on different plantations within a single island were described as "epidemic" or "epidemical" by the physicians and surgeons reporting on them. See for example Colin Chisholm, "Observations on the Influenza, as it lately appeared in the West Indies," *Medical Commentaries for the Year MDCCXC,* 5 (1791): 325-353; George Farquhar, "Article 2—No Title," *The Philadelphia Medical Museum, Conducted by John Redman Coxe, M.D.* 1 (1805): 175-183; idem "The Angina Maligna Successfully Treated by Mercury and Capsicum Gargle, by George Farquhar, M.D. of Clarendon, Jamaica," *The Philadelphia Medical Museum,* 1 (1805): 266-271; William Grieve, "Extract of a Letter from William Grieve, Surgeon in Grenada, to Mr. Kellie, Surgeon in Leith, on the Use of Bark of the Angeline Tree, as an Anthelmintic," *Medical Commentaries for the Years 1783-84*, 9 (1785): 365-66; John Lindsay, "An Account of the Epidemic Catarrh of the Later end of the Year 1789, as it appeared in Jamaica," *Medical Commentaries for the Year MDCCXCII,* 7 (1793): 499-527; William Macbeth, "A letter from William Macbeth, surgeon in Demerary, to Dr. Duncan, giving an account of a singular affection of the urinary organs, common among the Negroes in Demerary," *Medical Commentaries for the Year MDCCXCV,* 10 (1795): 232-246; James Makittrick-Adair, "Observations on the Regimen and Preparation under Inoculation, and on the Treatment of the Natural Small-Pox, in the West Indies," *Medical Commentaries Collected and Published by Andrew Duncan,* (1780): 211-245; William Wright, "Practical Observations on the Treatment of Acute Diseases, particularly those in the West Indies," *Medical Facts and Observations*, 7 (1797): 1-25;

Edinburgh, and Philadelphia and extant systems of disease classification.[9] Scholars' focus on the movement of medical knowledge out of the West Indies into metropolitan centers of learning, however, has inhibited historians from examining military medical personnel's interest in disease causality and their related therapeutic recommendations were assimilated and modified by civilians in the Greater Caribbean. This chapter shows the ways in which circulation of medical cases between enslaved healing adepts, white managerial staff, plantation surgeons, and urban practitioners generated new medical intelligence about the diseases ravaging large-scale estates in the Greater Caribbean and their best forms of treatment.

Debates about yellow fever laid the groundwork for domestic medical advice authors' epistemologically and politically fraught work to identify and classify, as formal diseases, a range of disorders prevalent on plantations throughout the West Indies and portions of the southern United States. The career of Thomas Dancer and his domestic medical advice text, *The Medical Assistant* (1801), represent the ordinary modes through which individual practitioners translated the insights generated by military medical personnel's engagement with fevers to interpret observations on illnesses that prevailed on large sugar and rice plantations. Dancer's text and his ambitions exemplify how elite practitioners in the Greater Caribbean actually functioned as knowledge-brokers, ones who translated very theoretical ideas emerging from the West Indian Garrison and from some plantation surgeons into compendiums of practical medical advice. Taking seriously laypeoples' hesitation to adopt not only eighteenth-century learned medicine's cures but also its theories of illness causality prompts greater attention to the varied

[9] Mark Harrison, *Medicine in an Age of Commerce and Empire, Britain and its Tropical Colonies, 1660-1830* (Oxford: Oxford University Press, 2011).

means through which new remedies and illness experiences were presented to lay audiences and incorporated into vernacular healing practices in the region.[10]

This translation of information from the theorized to the practical probably constituted the bulk of scientific and medical knowledge making that occurred among middling laypeople in the Greater Caribbean during this period.[11] The Caribbean produced a spate of erudite medical texts that required massaging before their contents were useful to ordinary readers.[12] It is certainly true, as scholars have claimed, that the

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[10] On therapeutics as a branch of medicine particularly resistant to change see Guenter Risse, "The History of Therapeutics," in W.F. Bynum and Vivian Nutton, eds. *Essays in the History of Therapeutics* (Amsterdam: Rodolphi, 1991), 3-12; John Harley Warner, "The Therapeutic Perspective," in *Medical Practice, Knowledge, and Identity in America, 1820-1885* (Princeton: Princeton University Press, 1986); Charles Rosenberg, "The Therapeutic Revolution: Medicine, Meaning, and Social Change in Nineteenth-Century America," in *The Therapeutic Revolution: Essays in the Social History of Medicine* (1979), 3-26.

[11] See chapter one which documents the pragmatic nature of the Jamaican overseer Thomas Thistlewood's knowledge-making.

[12] The vast and growing literature on yellow fever and febrility in the torrid zone that emerged largely from imperial practitioners who been stationed with the British Army or the Royal Navy in the West Indies during the second half of the eighteenth century is one type of quasi-theoretical literature. The list included John Bell, *An Inquiry into the Causes which Produce, and the means of Preventing Diseases among British Officers, Soldiers and Others in the West Indies* (London: J. Murray, 1791); Gilbert Blane, *Candid Reflections on the Expedition to Martinico, with an Account of the Taking of Guadalupe by General Barrington* (London, 1759); Colin Chisholm, *An Essay on the Malignant Pestilential Fever* introduced into the West Indian Islands from Boullam, on the Coast of Guinea, As it appeared in 1793 and 1794 (London: Printed for C. Dilly, in the Poultry, 1795); idem, *An Essay on the Malignant Pestilential Fever, Introduced into the West Indian Islands from Boullam, on the Coast of Guinea, As it Appeared in 1793, 1794, 1795 and 1796. Interspersed with Observations and Facts, tending to prove that the Epidemic existing at Philadelphia, New-York, &c. was the same Fever introduced by Infection imported from the West India Islands: And illustrated by Evidences founded on the State of those Islands, and the Information of the most eminent Practitioners residing on them* (London: Mawman, 1801); James Clark, *Treatise on the yellow fever as it appeared in the Island of Dominica in the years 1793-4-5-6* (London, 1797)*;* George Cleghorn, *Observations on the epidemical diseases in Minorca* (London, 1751); William Hillary, *Observations on the Changes of the Air and the Concomitant Epidemical Diseases in the Island of Barbados: To which is Added a Treatise on the putrid bilious Fever, common called, the Yellow Fever; and such other Diseases as are indigenous or endemial in the West India Islands, or in the Torrid Zone* (London, 1759); John Hunter, *Observations on the diseases of the army in Jamaica; and on the best means of preserving the health of Europeans, in that climate* (London, 1788); Robert Jackson, *A Treatise on the Fevers of Jamaica with Some observations on the intermitting fever of America, and an Appendix, containing some hints on the means of preserving the health of soldiers in hot climates* (London: 1791); William Lempriere, *Practical Observations on the Diseases of the Army in Jamaica as they Occurred between the Years 1792 and 1797* (London, 1798); James Lind, *Essay on Diseases Incidental to Europeans in Hot Climates with the Method of preventing their fatal consequences* (London, 1768); Hector McLean's *Enquiry into the Nature and Causes of the Great Mortality Among the Troops at St. Domingo* (London, 1797); Benjamin Moseley*, A Treatise on Tropical Diseases; on Military Operations; and on the Climate of the West Indies By Benjamin Moseley, M.D.* (London, 1787); John Rollo, *Observations on the Means of Preserving and Restoring Health in the West-Indies* (London, Printed for C. Dilly, in the Poultry, 1783); idem, *Observations on the*

military-based fever texts of the West Indies were far less theory-driven than the canonical medical texts associated with University-based medical learning.[13] The Barbadian William Hillary's (1757) *Observations on the Changes of the Air and the Concomitant Epidemical Diseases in the Island of Barbados,* received accolades from readers throughout the Atlantic world and became the canonical West Indian fever text because of its heavy-handed empiricism. "No author we know has so minutely so accurately and so critically related the symptoms of the *yellow,* or *putrid bilious yellow fever,* the *dry gripes,* the *yaws, elephantitus,* and some other diseases acute and chronicle," the reviewer wrote singing Hillary's praises.[14] Yet West Indian fever texts gained acceptance among other elite medical men because they proffered "philosophical" explanations for the empirical observations they chronicled. Though they were far less philosophical than their counterparts in the British Isles, West Indian yellow fever authors' books were written at a level far above the practical reader seeking information on how to diagnose and treat diseases prevalent in the region. By the turn of the century, the book landed as one of seven must-have how-to domestic medical advice texts that a reviewer recommended in a North American medical periodical.[15] What made Dancer's

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Diseases which appeared in the Army on St. Lucia in December, 1778; January, February, March, April, and May, 1779 (Barbados, 1781); Henry Warren, *A Treatise Concerning the Malignant Fever in Barbados and the neighboring islands; with an account of the seasons there, from the year 1734 to 1738* (London, 1741).

[13] Katherine Arner, "The Malady of Revolutions: Yellow Fever in the Atlantic World, 1793-1828" (Ph.D. diss., The Johns Hopkins University, 2014); Mark Harrison, *Medicine in an Age of Commerce and Empire: Britain and its Tropical Colonies* (Oxford: Oxford University Press, 2010).

[14] "REVIEW: Observations on the Changes of the Air," *The Critical Review, or Annals of Literature,* 7 (June 1759):520.

[15] See *The Medical Assistant's* rank as number 5 out of the 7 domestic medical advice texts listed in "Review" of James Ewell's (1807) domestic medical advice text, *The Planter's and Mariner's Medical Companion.* In the review, the author listed *The Medical Assistant* as one of the seven most prominent and well-received domestic medical advice texts, a list that included Tissot's *Advice to the People* and Buchan's *Family Physician.* "Review," *The Philadelphia Medical Museum* 5 (1805-1810), 190.

text so successful, and possibly what helped it achieve iconic status, was its capacity to translate erudite ideas into replicable and accessible examples and practices.

In fact, most of the sources for studying the movement of philosophical knowledge into vernacular practices are not suited for scholars of Atlantic Science's ambition to track the circulation of medical knowledge on an Atlantic scale. This scholarship tends to rely archival collections orientated towards colonials' contributions to metropolitan institutions of learning and their related scientific productions. The sources this literature relies upon, including transatlantic epistolary networks or the minutes of scientific societies, consequentially depict the movement of vernacular knowledge into elite and philosophical-oriented texts rather than the other way around.[16]

This chapter, in contrast, uses footnotes, which are extensive in the 275-page Part II of *The Medical Assistant,* in which Dancer identified maladies common in the tropical environment and their mode of cure. This section contains 467 citations to various sources of information, nearly two citations per page (See Table 1).[17] The scope and

[16] See also Antonio Barrera-Osorio, *Experiencing Nature: The Spanish American Empire and the Early Scientific Revolution* (Austin: University of Texas Press, 2006); Jorge Cañizares-Esguerra, *How To Write the History of the New World: Histories, Epistemologies, and Identities in the Eighteenth-Century Atlantic World* (Stanford, CA: Stanford University Press, 2001); Kathleen S. Murphy, "Translating the Vernacular: Indigenous and African Knowledge in the Eighteenth-Century British Atlantic, *Atlantic Studies* 8 (2011); Susan Scott Parrish, *American Curiosity: Cultures of Natural History in the Colonial British Atlantic World* (Chapel Hill, N.C. University of North Carolina Press, 2006); Neil Safier, *Measuring the New World: Enlightenment Science and South America* (Chicago: University of Chicago Press, 2008); Londa Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (Cambridge: Cambridge University Press, 2004).

[17] To be sure, the ample citations Dancer created is unique to *The Medical Assistant* and give pause about its use as a case study. Specifically, we must also consider the function of the footnotes for Dancer's work to position himself as an author and an objective, scientific observer. The footnotes suffusing Dancer's book functioned as yet another literary technology of disinterest, one that, like prefaces and other paratextual materials framing scientific claims, allowed the Jamaican to manifest his intellectual and social transparency before his readerships (an objectivity that was all the more necessary for Dancer given the dramatic amendments and revisions he proposed to canonical theories and prognosis of well-known disorders). In addition, the number of diseases covered in *The Medical Assistant* was far smaller than those set out in the works of Shannon or Thomas. This discrepancy brings to the fore the different amount of labor Dancer and his contemporaries expelled in making the text specific to the medicine of the Caribbean. For example, instead editing down their works so that they covered only the diseases specific in form or

specificity of footnotes in *The Medical Assistant* are unique to this text, making it an ideal resource for studying the activities of amalgamating, amending, theorizing, and then re-vernacularizing ordinary West Indian ideas about the origins of plantation maladies and their treatment—the particular processes of medical knowledge-making that are the subject of this chapter.[18] Dancer's copious footnotes show us how Dancer, as emblematic of other domestic medical advice authors, grappled with and reformulated erudite medical explanations in the face of new observations and insights generated by his varied informants.

Throughout the chapter, I place Dancer's copious and lengthy citations in context with details about his professional and personal life in order to excavate the processes of collection and translation of medical information from the Greater Caribbean's two institutions of medical knowledge making—the West Indian Garrison and the Plantation Complex. In so doing I am drawing from an established scholarly tradition that examines how practitioners and promoters of new medicines leveraged literary technologies, material devices, and languages of prudence and pragmatism in order to assure laypeople of the congruency between lay and elite medical ideas.[19] I am also building upon the insights of a newer literature in the history of medicine that explains how cures were

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preponderance to the region, Shannon and Thomas replicated the coverage and categories of contemporaneous domestic medical advice books issuing from practitioners with readerships in North America and the British Isles.

[18] For examples of other domestic medical advice authors who successfully translated more complex medical ideas see Randy Maddox's discussion of John Wesley's adaptation of George Cheyne's ideas in Maddox, "John Wesley on Holistic Health and Healing," *Methodist History* 46 (2007): 4-33; Helen King, *Midwifery, Obstetrics, and The Rise of Gynecology: The Uses of a Sixteenth-Century Compendium* (Aldershot: Ashgate, 2007).

[19] Sara Stidstone Gronim, "Imagining Inoculation: Smallpox, the Body, and Social Relations of Healing in the Eighteenth Century," *Bulletin of the History of Medicine,* 80 (2006): 247-268; Steven Shapin, "Trusting George Cheyene: Scientific Expertise, Common Sense, and Moral Authority in Eighteenth-Century Medicine," *Bulletin of the History of Medicine,* 77 (2003): 263-297.

moved, recorded, personalized, and verified by communities of laypeople.[20] Dancer's *The Medical Assistant* functions in this chapter as a case study, one that allows me to excavate the complicated process of producing a plantation medical advice text that was wildly popular among, at the very least, middling to elite readerships.[21] I am not, however, assessing the extent and degree to which the book changed plantation medical practice. Rather, I use *The Medical Assistant* to capture a particular process of medical knowledge making and dissemination in the late eighteenth-century Greater Caribbean.

The Medical Assistant was one of five domestic medical advice texts targeting the ailments of the torrid zone.[22] These torrid-zone domestic medical advice texts were also part of an older tradition of domestic medical advice literature that bifurcated into two distinctive genres by the middle of the eighteenth century. The first type concerned printed recipe books, a genre that began to take off in significant numbers in the seventeenth century and whose organization and contents resembled their manuscript counterparts.[23] Alongside this older tradition of self-help, a new genre of domestic

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[20] Elaine Leong and Sara Pennell, "Recipe Collections and the Currency of Medical Knowledge in the Early Modern Medical Marketplace," in Mark Jenner and Patrick Wallis, eds. *Medicine and the Market in England and its Colonies, c. 1450-1850* (New York: Palgrave MacMillan, 2007), 133-152.

[21] Its popularity and multiple editions (1801, 1807, 1819) is suggestive of the possibility that Dancer's text facilitated changes in the way planters and plantation managerial staff thought about and treated of plantation maladies.

[22] The other torrid zone domestic medical advice texts include James Grainger, *Essay on the More Common West Indian Diseases* (London, 1764); Jean Archibald Dazille *Observations sure les maladies des nègres, leurs causs, leurs traitements, et les moyens de les prévenir* (Paris, 1776); Robert Thomas, *Medical Advice to the Inhabitants of Warm Climates* (London, 1790); R. Shannon, *Practical Observations on the Operation and Effects of Certain Medicines in the Prevention and Cure of Diseases to which Europeans are Subject in Hot Climates* (London, 1794).

[23] On printed recipe books see, Laura Lunger Knoppers, "Opening the Queen's Closet: Henrietta Maria Elizabeth Cromwell and the Politics of Cookery," *Renaissance Quarterly,* 60 (2007): 464-99; Seth Stein LeJacq, "The Bounds of Domestic Healing: Medical Recipes, Storytelling, and surgery in early modern England," *Social History of Medicine* (2013): 451-68. There is also an expansive literature that documents the copying of printed recipes from eighteenth-century newspapers and other ephemeral sources into manuscript and family recipe books. See for example, Susan Hanket Brandt, "Gifted Women and Skilled Practitioners: Gender and Healing Authority in the Delaware Valley, 1740-1830," Ph.D. Dissertation, Temple University, 2014; Ellen G. Gatrell, "Female Healers and Domestic Remedies in Eighteenth-

medical advice texts appeared in significant numbers (around fifty by the end of the century) that circulated broadly throughout the Anglophone Atlantic. This second type of self-help book described in great detail a number of distinctive diseases and their treatments. [24] The torrid-zone advice texts of which *The Medical Assistant* is emblematic, were, however different from those authored by practitioners living in the temperate zone. The advice that practitioners resident in North America and the British Isles peddled was, in the words of Dancer, "not so well suited to this and other tropical climates, where diseases put on a different aspect and character; where they commonly run a shorter course and have a more fatal tendency."[25] "So many of the diseases of

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Century America: The Recipe Book of Elizabeth Coates Paschall," *Early American Medicine: A Symposium,* Robert I. Goler and P.J. Imperato, eds. (New York: Fraunces Tavern Museum, 1987).

[24] A handful of the most popular include: William Buchan, *Domestic Medicine or, the Family Physician* (London, 1772); Thomas Dover, *The Ancient Physician's legacy to his Country* (London, 1726); James Parkinson, *Medical Admonitions Addressed to Families Respecting the Practice of Domestic Medicine* (1799); John Tennent, *Every Man his Own Doctor* (Williamsburg, Va. 1734); S.A.D. Tissot, *Advice to the People,* trans. J. Kirkpatrick (Philadelphia, 1771); John Wesley, *Primitive Physic: or an easy and natural method of curing most diseases* (Philadelphia, 1789); Henry Wilkins, *The Family Adviser; or a plan and modern practice of physic* (Philadelphia, 1793). There is not a comprehensive bibliography on the American printed editions of these texts, one is in progress however. Edward G. Miner Library, *Social History of Medicine in the U.S. 1717-1917: An Annotated and Illustrated Catalogue of the Edward Atwater Collection of American Popular Medicine and Health Remedies,* Compiled and annotated by Christopher Hoolian, Vol 1 A-L (Rochester, N.Y.: University of Rochester Press, 2001). Secondary work on individual printed domestic medical advice texts include: Randy L. Maddox, "John Wesley on Holistic Health and Healing," *Methodist History* 46 (2007): 4-33; G.S. Rosseau, "John Wesley's *Primitive Physic* (1747)," *Harvard Library Bulletin,* 16 (1968):253-56; Charles Rosenberg, "Medical Text and Social Context: Explaining William Buchan's *Domestic Medicine," Bulletin of the History of Medicine,* 57 (1983): 22-35; C.J. Lawrence, "William Buchan: Medicine Laid Open," *Medical History,* 19 (1975): 20-35; Antoinette Emch-Deriaz, *Tissot: Physician of the Enlightenment* (New York, N.Y. Peter Long, 1992); Anita Guerrini, *Obesity and Depression in the Enlightenment: the Life and Times of George Cheyene* (Norman, OK.: University of Oklahoma Press, 2000). Good overviews of the genre in early America and England include: Mary Fissell, "The Marketplace of Print," in Mark Jenner and Patrick Wallis, eds. *Medicine and the Market in England and its Colonies, c. 1450-1850* (New York: Palgrave MacMillan, 2007); Thomas A. Horrocks, "Rules, Remedies, and Regimens: Health in America in Early American Almanac," in Charles E. Rosenberg, ed. *Right Living: An Anglo-American Tradition of Self-Help Medicine and Hygiene,* (Baltimore: Johns Hopkins University Press, 2003), pp. 112-146; Roy Porter, "Laymen, Doctors and Medical Knowledge in the Eighteenth-Century: The Evidence of the *Gentlemen's Magazine,* " in Porter, ed. *Patients and Practitioners,* pp. 283-314; Edwin Wolf, "Medical Books in Colonial Pennsylvania," in *Centenary of Index Medicus, 1879-1979,* John B. Blake, ed. (Bethesda, U.S. Department of Health and Human Services, Public Health Service, National Institute of Health, NLM, 1985), pp. 72-92; Rosenberg, "Health in the Home: A Tradition of Print and Practice," in *Right Living,* pp. 1-20.

[25] Thomas Dancer, *The Medical Assistant; or The Jamaica Practice of Physic* (1801), iii.

tropical climates are extremely rapid in their progress, that they are apt to be attended with fatal consequences," the Nevis surgeon Robert Thomas lamented in his preface to *Medical Advice to the Inhabitants of Warm Climates* (1790). Residents in the torrid zone, according to these authors, lacked printed resources that would allow them to confront head on the virulence and violence of diseases in the West Indies. In composing domestic medical advice texts for the Caribbean, this cadre of domestic medical advice authors were, in their own estimations, filling a large gap created by the parochial vision of domestic medical advice authors writing from the vantage of the British Isles.

The Medical Assistant reflected different types of intellectual labor and this chapter follows those endeavors in three parts. Part one situates the book within the world of elite eighteenth-century medical thought, particularly the preeminence of nosology as a methodology for studying and understanding disease and establishes the ways in which Dancer and his publishers summarized and presented this material in an accessible format. Section two documents in great detail the making of *The Medical Assistant*. As the epicenter West Indian fever calculations, Kington, Jamaica was crucial to Dancer's work as a complier of new information emerging from the region's ports, plantations, and garrisons. This section quantifies the citations and footnotes in Dancer's text to illuminate the varied sources of information that Dancer amalgamated in Kingston and also shows how Dancer used footnotes to mediate between different medical ideas still under debate among various medical faculties of the Anglophone Atlantic world. The Jamaican's deep connection with large-scale estates provided him with the sources of information for the interpretation of a range of tropical disorders. The third section examines the book's popularity among different communities of readers engaged in the schematic partition of

the natural world into different orders and species. It shows how Dancer leveraged the pre-eminence of taxonomy as a key area of investigation in order to positively shape the book's reception in the Greater Caribbean and the larger Anglo-Atlantic world. As a taxonomic encyclopedia of West Indian disease, the text had a remarkably broad geographic appeal: it passed through and was read by various groups of agriculturalists, fever theorists, natural historians and practitioners entrusted with the care and management of large populations.

I. Packaging and Organizing The Medical Assistant's *Nosology*

The growth and reification of nosology in the British Isles and in the colonies formed an important intellectual context for Dancer's conception and execution of the disease categories that appeared in *The Medical Assistant.* For most philosophical communities in the Anglo-European-Atlantic world, including the Royal Society of London and the Royal Society of the Arts in the British Isles and the American Philosophical Society in North America, taxonomy had functioned, since at least the mid-eighteenth century, as a methodological point of entry in the natural sciences. In their publications and meetings, the members of these institutions used different taxonomic systems, notably those of Carl von Linnaeus and François Boissier de Sauvages, to order and draw conclusions from the observations that their members and correspondents collected from the animal, plant, and human worlds and submitted for interpretation. In the last decade of the eighteenth century, taxonomy began to reshape formal medical thought as medical universities and medical societies began to embrace nosology—a taxonomic system for ordering and classifying disease—as part of a broader shift towards more ontological concepts of disease. Throughout the Atlantic World, naturalists and

practitioners collected data on the symptoms, causes, and sometimes, the local pathological effects of a malady, compared their observations, and used this information to divide and group illnesses into discrete orders, classes, and sometimes, genera of disease. In specialist medical periodicals such as the *Annals of Medicine, Medical Repository,* and the *London Medical and Surgical Spectator* nosology functioned as a method practitioners used. Nosology gave practitioners a coherent scheme for classifying and identifying disease.[26]

Although nosology seems to non-experts as one of many confusing, complicated, and eventually outmoded systems of eighteenth-century learned medicine, it was hardly irrelevant to both practitioners and laypeople of the time. With publication of University of Edinburgh professor William Cullen's nosology in his *First Lines of the Practice of Physic* (1778-9), the faculty at British medical universities, their students, adherents and followers, and members of scientific and medical societies turned their attention to the project of taxonomizing illness.[27] As a system for creating ontologies of illnesses and therefore identifying and naming disease, nosology functioned much like molecular biology today—it provided late eighteenth-century medicine with a methodology for a bringing disease, in an era before the atoms, bacteria, and viruses, to life as a discrete entity. Nosology provided practitioners with a way to account for, interpret, and group a malady's symptoms, manner of infection and progress under a categorical name. In his

[26] On medical journals as an engine of change and a tool for the dissemination and standardization of practices in medical teaching see the essays in W.F. Bynum, Stephen Lock, and Roy Porter, eds., *Medical Journals and Medical Knowledge: Historical Essays* (London: Routledge, 2010).
[27] Knud Faber, *Nosography: The Evolution of Clinical Medicine in Modern Times* (New York: Paul B Robert P. Hudson. Hoeber, Inc, 1922), 1-27; *Disease and its Control, the Shaping of Modern Thought* (New York: Greenwood Press, 1983), 142-168; Lester King, *Medical Thinking, A Historical Perspective* (Princeton: Princeton University Press, 1982), 146-164; F. Kräupl Taylor, *The Concepts of Illness, Disease, and Morbus* (Cambridge: Cambridge University Press, 1979), 5-16.

book Dancer identified and described the many different ailments encountered in the West Indies as specific diseases that were common in Europe but behaved differently in warm climates and therefore required modes of treatment different from those prevalent in the British Isles and the temperate regions of North America.

Most importantly, nosology, at its heart, suggested that practitioners needed to name disease in order to identify its *specific* remedies. The idea of *specifics* in therapeutics supported the notion purported by nosologists that "despite their variable courses and symptoms in individual patients, diseases are specific entities which can be precisely described by astute clinicians."[28] Whereas previous therapeutic systems advocated the use of individually prescribed and titrated medications that worked by helping the body eliminate a disturbed humor that had caused disease, nosology taught practitioners that once named and classified, diseases called for specific remedies in their modes of treatment. Correspondingly, after the nosological turn in elite medicine, the number of diseases appearing and described in domestic medical advice exploded towards the end of the eighteenth century.[29]

Dancer was one of many other domestic medical advice authors writing at the end of the eighteenth century who sought to employ nosology in order to make the

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[28] "Nosology," in W.F. Bynum and Roy Porter, eds. *Companion Encyclopedia of the History of Medicine,* vol. 1 (London: Routledge, 1993), 341-50; quote p. 343.

[29] There are a number of different ways to quantify the growth in the number of disease categories presented in domestic medical advice texts over the eighteenth century. The most accurate, however, is to compare different editions of a single text. So for example, if we were to compare the number of ailments listed in the second (1734) and fifth (1752) editions of John Tennent's popular American text, *Every Man his own Physician* (Williamsburg) we would see that in the 1734 edition Tennent listed 43 different disease entries, whereas his 1752 edition contains 60. The growth in the number of ailments listed in the first, (1781), fourth (1794) and fifth (1800) editions of John Eliot's text, *The Medical Pocket-Book* (London) is even more startling. In the first edition, Elliot listed 138 different disease entries, in the fourth, 155, and the fifth contained 159 different entries, a growth of nearly one disease category per year. The different editions of John Theobald's book, *Every Man his Own Physician* (London, 1764, 1770) provides a more dramatic example of the proliferation of new ailments. Here the number of entries expanded from 99 in the first edition to 141 in the second, nearly seven different ailments per year.

identification of diseases easier for lay readers. In their texts, domestic medical advice authors attempted to transform vernacular understanding of illness into quasi-formal descriptions of disease. *The Medical Assistant* exemplified this trend. The book was divided into three sections. In the first portion of his text, Dancer described the operation of the human body in sickness and in health, using Neo-Hippocratic medicine to explain, in very general terms, how rapid shifts in climate, diet, stress, and clothing created changes in the human body that rendered an individual more susceptible to illness. The second section, the main portion, functioned as a compendium of disease. This portion contained encyclopedic entries of different illnesses frequent in the tropics. Here Dancer identified and described disorders common in the West Indies and characterized their symptoms, behavior, and mode of treatment. The third section was made up of appendices that presented formulae and recipes for the various cures Dancer had attached to his descriptions of disease in section two. Rather than generate strategies of body management as had been the medical tradition in seasoning guides, the Jamaican physician used nosology to produce a dictionary of ailments and empowered laypeople to understand and treat illness.

Thus while Dancer's formal medical training and participation in yellow fever debates underlay his interpretation of West Indian disorders, in the presentation of his material and in his intentions *The Medical Assistant* was also very much the product of the Enlightenment project to disseminate *practical* rather than theoretical medical information. The text read in some ways like a 380-page medical encyclopedia of West Indian diseases and their cure, one presented in a vernacular language and packaged and organized so as to facilitate ease of use. Indeed, like many domestic medical advice texts

intended for laypeople, *The Medical Assistant* was *encyclopedic*—it shared features with many of the more popular eighteenth-century dictionaries of the arts and sciences, particularly in its presentation, goals, and orientation towards a broad readership. Writing for "those who have families, or who are entrusted with the charge of negroes, and who are frequently at a loss for medical assistance, but in some measure medical men, at least to such as are newly arrived in the island, and to those engaged in country practice, who have, in some situations, but little access to books, and less opportunities for reading," Dancer stressed that his text "teaches in a plain and familiar manner, how to distinguish and treat the prevalent diseases of the climate." "Such a knowledge of diseases and their treatment," would, Dancer explained, "enable man to be useful to himself and others."[30] Both Dancer and the text's various booksellers, editors, and printers heralded the text as an audacious medical prospectus, noting in particular its broad applicability to the ailments of the torrid zone. And in various asides throughout the text, Dancer boasted of his willingness to transcend the particular—in this case the etiologies of disease propounded by different political and economic groups of merchants, abolitionists, practitioners, and planters—in order to arrive at an objective taxonomy of tropical diseases and their cure. In its content, language, production, and organization, as well as the ongoing clarification of the body's claims in the text's footnotes, *The Medical Assistant,* like other dictionaries of arts and sciences, exemplified the Enlightenment ideal

[30] Thomas Dancer, introduction to *The Medical Assistant, or The Jamaica Practice of Physic* (Kingston: Alexander Aikman, 1801), iii.

that the creation of new medical knowledge should be a disinterested and collaborative endeavor.[31]

Scholars have situated the eighteenth-century West Indies at the vanguard of the "practical enlightenment," and white West-Indians' appetite for practical knowledge formed important context for the positive reception of *The Medical Assistant.*[32] The complaints that itinerant naturalists made about the hostility of white colonists to their efforts relay the essential features of white West Indians' scientific culture: it was oriented towards pragmatic and consumer-driven information and exhibited hostility for the philosophical ambitions guiding scientific inquiry in institutions in North America and the British Isles. "I have lived in a state of total obscurity and even contempt since I arrived in this island," Francis Masson, one of Sir Joseph Bank's botanical collectors despaired from Nevis. "Being unsupported by friends or money I have not been able to carry my researches for no more than two or three of the neighboring islands," he explained. "A philosopher," he complained, "is a monster of nature to the people in this part of the world."[33] For Mason, the refusal of the Nevis legislature to financially support his expedition marked the island's indifference to the importance of identifying the universal order and rules of nature that underlay and produced the natural phenomena that Mason recorded and collected.

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[31] On encyclopedias as the embodiment of Enlightenment values see Richard Yeo, *Encyclopedic Visions: Scientific Dictionaries and Enlightenment Culture* (Cambridge: Cambridge University Press, 2001), xi-xviii.

[32] Trevor Burnard, *Mastery, Tyranny and Desire: Thomas Thistlewood and His Slaves in the Anglo-Jamaican World* (Chapel Hill: University of North Carolina Press, 2004), 102-36; April Shelford, "Pascal in Jamaica, or The French Enlightenment in Translation," *Proceedings of the Western Society for French History,* 36 (2008): 53-74.

[33] Francis Masson to Sir Joseph Banks, July 26, 1780 in Papers of Sir Joseph Banks, Series 13.18, State Library, New South Wales.

Instrumentality also guided reading practices among the region's white creole population. This penchant for useful information shaped the region's demand for particular types of materials. "Reading I assure you," the St. Kitt physician James Grainger wrote in private correspondence, "is the least part of a Creole's consideration." "It is even happy if they can read at all," he continued. "Spell few of them can and when they take up a book, modern romance, magazines, or newspapers are the extent of their lucubrations," he groused.[34] White West-Indians' preference for useful information confounded Mason's philosophical ambitions and Grainger's literary aspirations. Grainger, Mason, and other natural philosophers attributed to their failed ascent to the preferences for plainness that prevailed in the region. But this same stylistic mode informed the writing of most domestic medical advice texts of the time, a feature that explained *The Medical Assistant's* appeal as well as other texts like it to West Indian readerships.

Variations in the reading capacities of white plantation workers shaped the modes of address, forms, and languages employed in texts addressing topics such as agricultural amelioration, plantation management, and domestic medicine in the West Indies. The authors of plantation management texts in particular hoped their tracts appealed to a range of readers who included gentlemen-proprietors in urban centers, attorneys resident in the island, and overseers working on estates. Language in these books varied to accommodate different levels of literacy among these three audiences. "I have chosen a topic of which the meanest overseer," could understand, Patrick Kein wrote in the introduction to his essay on animal husbandry in the West Indies. He treated his subject

[34] James Grainger to Thomas Percy, June 5, 1762 in John Nichols, ed. *Illustrations of the Literary History of the Eighteenth Century*, Vol. 2 (London: 1817), 278.

"with some plainness, aiming much more at perspicuity than ornament."[35] The Antiguan agricultural reformer Samuel Martin, for example, announced that his *Essay* was "first written for the instructions of a young planter."[36] Readers of the plantation manager-turned-author William Belgrove would find "plain observations, which were first made for my own amusement and improvement."[37]

Time and experience would weather tender newcomers into old hands. Authors presented their agricultural precepts as general rules rather than hardened axioms and left open the possibility of their alteration. Martin stressed he had compared traditional agricultural practices against his own experiences before committing to the rules he set before readers. He had submitted each precept of British husbandry "to the correction of my experienced brethren of planters." As Martin conceded, "useful additions or emendations of such future experience shall justify," ongoing agricultural innovation in the region.[38] Authors acknowledged the inevitability of overseers' and estate managers' modifications to their recommendations and touted the flexibility of their systems in the face of new discoveries. The utilitarian application of new agricultural discoveries left open the possibility that humble overseers, new planters, and other members of the managerial hierarchy might contribute useful information to the project of agricultural amelioration. But as was similar in other sciences in the region such as medicine, new agricultural theories and practices were committed to paper and recommended only after plantation management authors had weighed the merits of new ideas against the wisdom

[35] Patrick Kein, *An Essay Upon Pen-Keeping and Plantership* (Kingston, Jamaica: 1796), 9.
[36] Samuel Martin, *An Essay on Plantership*, i, 26.
[37] William Belgrove, *A Treatise upon Husbandry or Planting. By William Belgrove. A regular bred, and long experienc'd planter of the island of Barbados* (Boston, 1755), 2.
[38] Martin, *An Essay on Plantership* 20, 26.

of tradition. *The Medical Assistant's* success, as a translation of contemporary nosology of diseases prevalent in the West Indian climate, owed in large part to Dancer's appropriation of the practical language that prevailed in the region's culture of scientific and rationalized agrarianism.[39]

Though written in a vernacular and friendly manner, many late-eighteenth-century domestic medical advice books ordered chapters according to the classification system created by Edinburgh physician William Cullen. Robert Thomas, a Nevis surgeon, for example, arranged his book, *Medical Advice to the Inhabitants of Warm Climates* using this system; readers found individual chapters titled dysentery, leprosy, diabetes, etc. These entries appeared according to the relationship of these ailments to one another as defined and set out in William Cullen's nosology. Other advice authors organized their entries according to the groups or populations among which the ailments they described prevailed. The author of *The Modern Family Physician* (1776) for example, organized his disease entries according to their frequency among "children," "women," "the lower classes of people," and "studious and sedentary persons."[40] The preeminence of nosology as an authoritative method for diagnosing illness among medical faculties throughout the Anglophone world encouraged domestic medical advice authors to replicate nosological systems of arranging disease in the books they wrote for laypeople—an organizational decision reflecting domestic medical advice authors' unthinking assumptions about readers' internalization of elite medicine's nomenclature and deep epistemological

[39] The *London Review* for example, noted that the work would be "a particularly valuable acquisition to the West-Indian practitioner," see "Account given of the First Addition of *The Medical Assistant* or *The Jamaica Practice of Physic* in several English and American Reviews," in Thomas Dancer, *The Medical Assistant, or the Jamaica Practice of Physic* (St. Jago de la Vega: John Lunan, 1809), np.
[40] *The Modern Family Physician* (Dublin, 1776), title page.

structures. *The Medical Assistant*'s popularity reflected the text's engagement of plantation managers' and civilians' priorities, rather than, as was the case with his peers, a blind adherence to formal nosology.

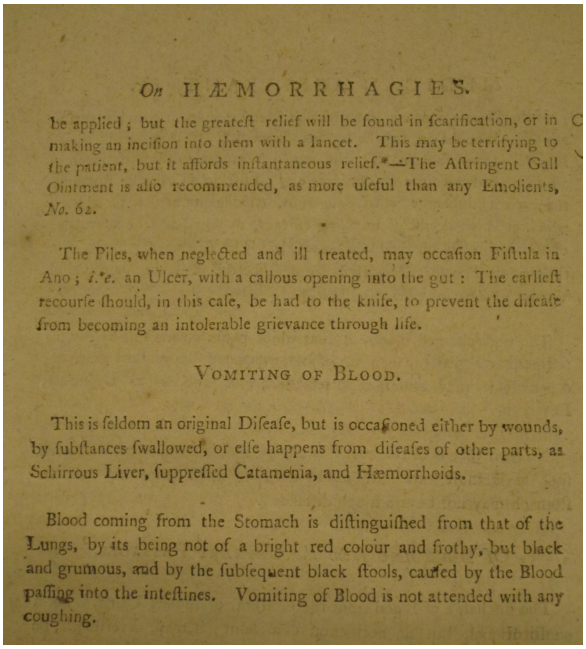
Dancer's ability to connect with the pragmatic elements of West Indian's scientific culture is best visible in the organizational scheme he imposed upon his individual chapters in section two of the text. In the presentation of different ailments, Dancer rejected traditional nosological precepts for ordering and arranging disease, instead he used an ailment's most prominent symptom or the area of the body it primarily disturbed as a means to organize the various disease entries in his book. This scheme illustrates Dancer's commitment to making his interpretation of different diseases accessible by popular audiences.[41] In contrast to his peers, Dancer began with "fevers," because they completely incapacitated their victims and affected the entire body. The subsequent chapters covered internal illnesses that manifested as symptoms attributable to particular organs. His next chapter was titled "Bowel Complaints," and another covered "Cutaneous Complaints," included yaws and smallpox. The appearance of a malady's common symptom on the runninghead of each chapter **(See Figure 1)**. He finished with local, surgical complaints. This final section included entries covering cures for wounded limbs and burns.[42] It might be argued that Dancer began with fevers and

[41] In the text, Dancer listed and described individual diseases, but he grouped them together as subcategories in chapters designated by the diseases' most prominent symptom. Hence, in the *Medical Assistant,* dysentery, diseased liver, jaundice, diarrhea, cholera morbus and dry belly-ache all appeared in the chapter titled, "Bowel Complaints Frequent in the West Indies." Dancer, *The Medical Assistant,* (1801), 93-106.

[42] The book's organizational scheme aroused the contempt of one reviewer in the British Isles. "In his [Dancer's] arrangement of diseases," the reviewer wrote, "the author has not followed the usual nosological order." The reviewer continued to indict Dancer's decision, citing the Jamaican's decision to first treat "diseases affecting the whole body, comprising the different species of fever, then of partial diseases, or those having their seats in particular organs, or parts of the body, as consumption, dropsy, diseases of the skin etc." "Art. 22 *The Medical Assistant*," *The British Critic*, 18 (November: 1801), 546.

ended with surgical complaints because the former were more common throughout the West Indies than the latter. Recalling Dancer's ambition to facilitate laypeople's identification of the diseases they confronted so that they might seek an appropriate method of cure explains Dancer's prioritization of bedside symptoms as the criteria for the arrangement of diseases in the text.

Figure 1. Runninghead from Dancer's Chapter 6, "On Haemorrhagies." Thomas Dancer, *The Medical Assistant* (1801).



On HÆMORRHAGIES.

be applied; but the greateſt relief will be found in ſcarification, or in making an inciſion into them with a lancet. This may be terrifying to the patient, but it affords inſtantaneous relief.*—The Aſtringent Gall Ointment is alſo recommended, as more uſeful than any Emolients, *No.* 62.

The Piles, when neglected and ill treated, may occaſion Fiſtula in Ano; *i.e.* an Ulcer, with a callous opening into the gut: The earlieſt recourſe ſhould, in this caſe, be had to the knife, to prevent the diſeaſe from becoming an intolerable grievance through life.

VOMITING OF BLOOD.

This is ſeldom an original Diſeaſe, but is occaſioned either by wounds, by ſubſtances ſwallowed, or elſe happens from diſeaſes of other parts, as Schirrous Liver, ſuppreſſed Catamenia, and Hæmorrhoids.

Blood coming from the Stomach is diſtinguiſhed from that of the Lungs, by its being not of a bright red colour and frothy, but black and grumous, and by the ſubſequent black ſtools, cauſed by the Blood paſſing into the inteſtines. Vomiting of Blood is not attended with any coughing.

The modes of organizing and managing the information in the text's appendices were also critical in making the book popular among and useful to lay readers. Dancer's first appendix contained "forms of medicines," or well-known compound medicaments.[43] These were blends of mineral, botanical, and chemical substances such as jalap,

[43] Dancer, *The Medical Assistant* (1801), 325-347.

antimony, mercury, purging salts, and cream of tartar hawked by urban druggists and merchants in the island. Here Dancer assigned a number to each of these formulae. When relevant, in section two of the book, he inserted this number under the description of the disease it could be used to treat, creating a fairly straightforward cross-referencing system that allowed readers to immediately locate a cure in the appendix of his book. Dancer's second appendix listed alternatives to well-known European and British cures by providing medicines that could be found in the natural world of Jamaica. Under the heading of "Jamaica Simples," Dancer listed local simples and country remedies that could be made from them.[44] The cures in this second appendix used plants native to the island and could be substituted for the medicines listed in the first appendix. The entries in the second appendix were also assigned a number and cross-referenced in the body of the work.

Dancer bundled and organized information in the appendices in a manner that was strikingly more friendly towards lay readerships than the organization and packaging suffusing both other domestic medical advice texts *and* prominent in natural histories of the Caribbean.[45] Both genres prioritized the naming systems of Linnaeus in presenting lists of plants from which cures could be concocted. In organizing the material in the section on "Jamaica simples," Dancer rejected the Linnaean classification system and method of arrangement.[46] Dancer listed these materials in English, according to their

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[44] Dancer, *The Medical Assistant* (1801), 357-372. On the overlap between botanical and therapeutic lists of plants see Valentina Pugliano, "Specimen Lists: Artisinal Writing or Natural Historical Paperwork?", *Isis,* 103 (December, 2012): 716-726.

[45] On lists in natural history see Brian W. Ogilvie, *The Science of Describing: Natural History in Renaissance Europe* (Chicago: University of Chicago Press, 2006), pp. 192, 208 and Alix Cooper, *Inventing the Indigenous: Local Knowledge and Natural History in Early Modern Europe* (Cambridge: Cambridge University Press, 2010), 74, 79.

[46] Though he did list the plant's Linnaean nomenclature in in italics and parentheses following its common designation.

common designation. Dancer grouped the simples in the second appendix under headings that designated the primary effect of the simple upon the human body. In other words, he grouped and presented the island's simples according to their primary *virtues,* a practice common in the numerous herbals of the late seventeenth and eighteenth century. Dancer's embrace of ordinary nomenclature for his list of simples endeared the book to reviewers but also invited critique. "The forms of medicines are given in English and may thus prove useful in the hands of sensible parents and masters," one reviewer noted. Yet the reviewer went on to object that "the descriptions of symptoms and of the indications of cure are not written in a style sufficiently popular to produce the benefits intended by the author, while they are too slight to merit particular attention from medical readers."[47] The modes of organizing and managing therapeutic information Dancer employed were critical in making the book popular among lay readers but they confounded reviewers who wanted to pin down the text as either a popular handbook or a learned treatise.[48]

The packaging of *The Medical Assistant* was not beyond reproach. The efforts of the book's first printer, Alexander Aikman, to make *The Medical Assistant* useful and to keep the text within reach of middling readers met with disaster in the 1801 edition. Some copies *The Medical Assistant* were printed upon straw rather than blue-rag paper, the result of an experiment undertaken by Aikman who likely substituted straw for traditional rag paper because of the shortage of white-rag in Jamaica in 1800. But the printer/publisher probably also anticipated that straw, although cheaper, would better

[47] "Art 33. *The Medical Assistant or Jamaica Practice of Physic t Designed chiefly for the Use of Families and Plantations By Thomas Dancer MD,*" *The Monthly Review, or Literary Journal Enlarged*, 38 (1802), 443.
[48] Dancer, *The Medical Assistant* (1801), "Jamaica Simples," 357-372.

withstand the characteristic heat and humidity of the Caribbean environment. Such a paper might ensure the longevity of individual books so that, like recipe books, they could be passed along and modified by generations of readers. Aikman's experiments with new paper technology, however, displeased many of the text's readers. Whether they received copies on blue-rag or straw, reviewers of the first edition strained to read the text printed on either the porous straw or dense blue-rag sheets. Some complained vigorously. "We have never seen paper so vile applied to printing," one reviewer quipped. "But to insure the acceptance of his [Dancer's] apology, the price set on the work should have been much reduced," he closed.[49] The blue cast of the fibers in *The Medical Assistant's* paper reduced the contrast between the black print type and the background of the page. The coarseness of the straw paper, meanwhile, produced more problems than it solved. Its rough texture made annotation with a quill difficult if not impossible. Even worse, it insufficiently absorbed the ink. Its inability to absorb ink caused individual letters and numbers to bleed into one another. The indistinctness of the numbers was extremely problematic in a medical text. Readers consulting the first edition of the text might struggle through the prose and attach scraps of paper with annotations. But the indistinctness of the individual numbers in the appendices was extremely problematic if not lethal for weary-eyed eighteenth-century readers who used the text to concoct mixtures and medicinal compounds at home.[50]

[49] "Art 22. *The Medical Assistant; or the Jamaica Practice of Physic," The British Critic*, 18 (Nov 1801): 547.

[50] The poor paper quality did not go unnoticed either by Dancer. Dancer apologized for the paper quality in the preface in his first edition and in an advertisement for the second edition. Dancer, *The Medical Assistant,* (1801), vi, idem, "Advertisement to the Second Edition," (1809), xiii.

The anticipation *The Medical Assistant* elicited from its printers and its sellers throughout its multiple editions evidences *The Medical Assistant's* enduring pull. The other domestic medical advice texts discussed here were each published once. *The Medical Assistant*, in contrast, went into three editions—1801, 1809, 1819—an indication of its popularity.[51] The first and second editions both appeared as quartos in boards and sold for one pound and one shilling in Britain.[52] The import price in the United States was considerably larger. There it sold for $14.00, putting it out of reach for most consumers.[53] The publication of the first two editions outside major urban centers of printing in North America and the British Isles, first in Kingston and then in Spanish Town, indicates its publishers expected profits to come from the book's consumption among local readerships who lived in proximity to its place of production, rather than those living in far-distant centers of calculation.[54] The fact that Alexander Aikman printed some copies of the first edition of the *Medical Assistant* on blue-rag paper, amidst a shortage of imported white-rag to Jamaica in 1800 testifies to the faith Aikman maintained in the

[51] In 1802, the Jamaican apothecary and surgeon William Wright edited and issued a posthumous edition of Grainger's book in Edinburgh. Wright made no changes to the body of the text, but he did add several footnotes as well as appendix containing a Linnaean nomenclature for the Jamaican Simples that Grainger had listed in the 1764 edition of his book. The other two late-eighteenth-century Anglophone domestic medical advice texts intended for readers visiting or living in the West Indies, the Nevis surgeon Robert Thomas' *Medical Advice to the Inhabitants of Warm Climates* (1790) and R. Shannon's *Practical Observations on the Operation and Effects of Certain Medicines in the Prevention and Cure of Diseases to which Europeans are Subject in Hot Climates* (1794) had only one edition. Moreover, all of these texts were both published in London or Edinburgh, urban centers far removed from the texts' purported readerships.

[52] "Art 22. *The Medical Assistant; or the Jamaica Practice of Physic," The British Critic*, 18 (Nov 1801): 547.

[53] Advertisement of James Humphreys of Philadelphia in *New York Commercial Advertiser,* New York, NY, November 6, 1804, p. 3

[54] Alexander Aikman, the colony's official printer, published the first (1801) edition of *The Medical Assistant*, in Kingston, Jamaica. John Lunan, a printer working out of Spanish Town who issued a number of Jamaica's civil and natural histories, published the second version in 1809. See Thomas Dancer, *The Medical Assistant; or The Jamaica Practice of Physic* (St. Jago de la Vega, John Lunan: 1809). The third edition of *The Medical Assistant* (1819) issued posthumously, was published in London.

work's initial utility and pull.[55] Whatever inhibitions the poor paper quality created about its purchase, its appeal would surpass, Aikman believed, readers' initial hesitation. Sure enough, the work held enough popularity and profitability to ensure a second (1809) cosmetically-improved edition, printed on white-rag.

The four reviews of *The Medical Assistant* appearing in North American medical journals and British literary periodicals hailed the text's learned scope and denigrated its popular appeal; if damning, these comment nevertheless the capture Dancer's perceivable re-vernacularization of West Indian diseases and their cures. One commentator in *The Critical Review* noted that it "contains a sufficiently ample, as well as very judicious account of the diseases most prevalent within the tropics, with the remedies adapted for their relief." "We would have enlarged farther on it," he continued, "had not its popular nature rendered the greater part of it too familiar."[56] The editor of *The British Critic* puzzled over Dancer's "arrangement of diseases," and the fact that "the author has not followed the usual nosological order."[57] As reviewers of *The Medical Assistant* recognized, the book was very effective at communicating its ideas to laypeople, it was, to echo the language of one reviewer, a "practical" publication.

The reviewers' remarks underestimated the translation work Dancer undertook in creating the text. The making and selling of what was essentially a 467-page encyclopedia of tropical disease was a complicated project of synthesis. This process

[55] Printers and publishers resorted to blue-rag paper when white rag paper was particularly expensive or scarce. The appearance of the first-addition of *The Medical Assistant* on blue-rag sheets indicates the shortage of more expensive, imported white rag in the island in 1801. Although blue-rag is of inferior quality to white-rag, historians of the book consider the publication of a text on blue-rag an indicator of its expected commercial profitability among geographically proximate readerships.
[56] *The Critical Review*, 34 (London, 1802), 226.
[57] "Art. 22 *The Medical Assistant; or, Jamaica Practice of Physic, Designed Chiefly for the Use of Families," The British Critic,* 18 (November: 1801), 546.

entailed the mastery of ancient and contemporary medical authorities and the incorporation of information gathered from local medical personae and patients on how new tropical medicines had turned out in practice into extant ideas.

II. Making The Medical Assistant: Collecting, Collating, and Compiling in Spanish Town, Bath, and Kingston

Spanish Town, Bath, and Kingston functioned spaces of medical observation in Jamaica and Dancer's residencies in them during the last quarter of the eighteenth century facilitated his access to the materials necessary to interpret and classify the most common diseases in the West Indies and their treatment.[58] His position within these ports and communities allowed him to generate the encyclopedic entries of disease in *The Medical Assistant* and create up-to-date medical text of such magnitude and scope.

Dancer arrived to Jamaica in 1773 with a medical degree from the University of Edinburgh and settled in Spanish Town, the island's military seat. His first official appointment was in 1780.[59] In that year Dancer served as the physician to the expeditionary force to capture Fort San Juan (in present-day Nicaragua) that was discussed in chapter three. The battalion Dancer accompanied comprised of around 500 soldiers, mostly British regulars and a local militia known as the Jamaican volunteers.[60] High mortality among the expedition's troops during the occupation of the fort

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[58] Dancer's attempts to infiltrate the upper echelon of Kingston's medical elite, however, did not meet with immediate success when he relocated to the city in 1795. On Dancer's repeated social disappointments and frustrated efforts to build up an elite medical practice during his early years in Kingston see excerpts of his letters published in David Grant, *An Exposition of the Conduct and Character of Thomas Dancer, M.D. By David Grant, M.D.* (Jamaica: 1805), 1-15.

[59] "Thomas Dancer," *Oxford Dictionary of National Biography Online,* last consulted August 30, 2016.

[60] The expedition was a failure, in large part due to rampant mortality among the troops as they marched from the shore to the castle over a period of seven days. Dancer attributed much of the sickness to the brackish water ingested while the group camped on a savannah following their arrival on shore, the excessive toil carrying boats up an arid riverbed on their way to the castle, and exposure to the sun's rays as they erected batteries and began the siege. Dancer, *A Brief history of the late Expedition against Fort San Juan*, 1-11.

diminished the regiment's strength and made it impossible to hold. Upon his return with the rest of the expedition to Jamaica in 1781, Dancer published *A Brief history of the late Expedition against Fort San Juan, so far as it relates to the diseases of the troops.* Turning a sow's ear into a silk purse, Dancer used the human catastrophe to stake a place in an emerging field of West Indian fever theory. Shortly thereafter, the Jamaican Colonial Assembly promoted Dancer as the physician to the hospital at Bath, Jamaica.[61] Dancer remained in Bath from 1781-1794, first as the physician to the hospital until 1788, and then as the botanist for the island's botanical garden.

Dancer's career accelerated between 1789-1794, when he acted as the botanist and curator of the Jamaican botanical garden in Bath, in the parish of St. Thomas in the East. During this period, Dancer leveraged his appointment to make a name for himself throughout the Atlantic. He became a celebrated figure among scientific community of the Royal Society of Arts in London. The Society praised Dancer for his success re-propagating the Ceylon cinnamon trees from the East Indies to the Royal Botanical Garden in Bath, Jamaica.[62] Dancer not only gained renown in the Isles, his work as a go-between among the metropolitan members of the Royal Society of the Arts and their colonial counterparts in Jamaica made him the island's point of contact for the Society of the Arts. He also facilitated communications and proposals between Jamaica's aspiring

[61] Dancer put his Spanish Town house up for sale in 1780. See Dancer's advertisement announcing its sale in *Jamaica Mercury and Kingston Weekly Advertiser,* January 4, 1780.

[62] The Society of Arts was a London-based organization that sponsored experimentation with new commercial crops such as coffee, cotton, and silk. It offered premiums to successful colonial cultivators and orchestrated the exchange of specimens and seeds. For Dancer's papers in the Society of Art's journal see Thomas Dancer, "Papers in Colonies and Trade," *Transactions of the Society, Instituted at London for the Encouragement of Arts, Manufactures, and Commerce*, 8 (1790): 205-219; Isaac Titford, Thomas Dancer, and Hinton East, "Papers in Colonies and Trade," *Transactions of the Society, Instituted at London for the Encouragement of Arts, Manufactures, and Commerce*, 9 (1791):169-196; George Unwin, G. Dominicus, and Thomas Dancer, "Papers in Colonies and Trade," *Transactions of the Society, Instituted at London for the Encouragement of Arts, Manufactures, and Commerce*, 10 (1792): 247-260.

botanical virtuosos and Sir Joseph Banks, president of the Royal Society of London. As a correspondent of both Banks and the Society and as the island's botanist, Dancer no doubt attracted the attention and friendship of many of the island's planters engaged in agricultural and botanical experimentation.

As the eighteenth century drew to a close, however, Dancer feared for the security of his appointment. Although support for botanical experiment in the West Indies did not wane, Dancer had reason to worry. The repeated flooding of the Breadfruit nursery in Bath from the adjacent Plantain Garden and Sulphur Rivers prompted the Jamaican Colonial Assembly to consider alternative locations for the South Sea plants that Sir Joseph Banks had shipped from Tahiti. In 1794, the Assembly voted to relocate the garden and nursery twelve miles east of Kingston on land the eminent planter Hinton East bequeathed to the colonial government.[63] Following his battle with the colonial assembly, a vituperative attack on the island's other naturalists, and Sir Joseph Banks' indifference to his plight, Dancer lost his appointment as island botanist in 1795.

When Dancer relocated to Kingston in 1795, the relocation no doubt augmented his already substantial access to printed medical and scientific texts and oral sources of information.[64] The best way to identify the types of texts and informants that his residence in Kingston facilitated is through an analysis of his citations, the place in *The Medical Assistant* where he named the individuals and printed authors who had provided

[63] The ordeal between Dancer, the members of the Colonial Assembly, and Sir Joseph Banks' indifference to Dancer's predicament is depicted in Thomas Dancer to Sir Joseph Banks, London February 24, 1794, Banks Papers, J 1:14, and idem "Memorial of Thomas Dancer, the island Botanist, to the Committee of Directors sitting at Bath, January 22, 1794," Banks Papers, J 1:15, both in Sutro Library, California State University, San Francisco, CA.

[64] In 1790 Dancer sent the Jamaican historian Edward Long a "Catalogue of the Principle Authors on Botany and Natural History in T.D.'s collection," based on an inventory made in June, 1789. The list included Linnaeus, Sloane, and Piso among the other 26 works. Thomas Dancer, Bath, Jamaica to (Edward Long, London), December 20, 1790 in Long Papers, *Add Mss* 22, 678 British Library.

him with his information. As was the case in other scientific works, Dancer's *citations* to various printed and oral sources of information supplemented and qualified the claims he made in the body of the text. Dancer's footnotes sometimes occupied upwards of two-thirds of a single page. Dancer tended to *name* his sources of information in three instances: when the body of the text dealt with a disease, for example yellow fever, whose classification and mode of treatment had yet to achieve consensus among the medical faculties of the Anglo-Atlantic world; in sections depicting diseases that seemed to be new or endemic to the region, such as yaws, dirt-eating, or the itch; and finally, in entries describing the unusual characteristics and progress of well-known diseases, such as smallpox, in the torrid environment. Dancer measured new observations on disease, provided by individuals of various ranks, ethnicities, and professions, against the wisdom of eighteenth-century physicians, the accepted authorities of medical knowledge. In so doing, he deliberated and critiqued ideas about the progress of disease and its treatment formed by practitioners in the British Isles. In turn, he commented on the merits of older medical authorities through invocations of new information coming from his and others' first-hand experience with illness in the West Indies.

As a technology, the footnote facilitated Dancer's work to bring medical theory up to speed with the facts issuing from warm climates. Dancer stuffed many of his footnotes with copious references to ancient authorities such as Celsus, Galen, and Hippocrates as well as contemporary authors located in the Continent and the British Isles. This latter group included references to the nosologist William Cullen and the physician Thomas Sydenham. In the text, Dancer repeatedly invoked a core of contemporary learned authorities and in the margins he elaborated upon or qualified their

claims, using the extra space enabled by the footnotes to set the wisdom of the ancients against the knowledge and systems propounded by practitioners in the British Isles, further amending the assumptions of both these groups by setting down facts and observations he gathered from West Indian military garrisons and plantations. Personal anecdotes based on his experiences on plantations and in military garrisons and narratives of illness he obtained socializing with other Jamaican medical men further established his credentials as a bona-fide West Indian practitioner. Shot through with references to British medical celebrities, imperial medical men, ordinary Jamaican practitioners, surgeons, well-known planters, slaves, Indians, and other West Indian laypeople, the book's citations chipped away at the axioms of elite medicine to reveal instead British medical theory under revision. Dancer's citations remind us not to treat the numerous ideas about illness and the body in the British Caribbean as divided between two separate arenas of elite and lay philosophy but to see them as overlapping and highly porous terrains of expertise and practice. Dancer strategically probed these spheres in order to conclusively inscribe ailments prevalent on estates in natural orders of disease and to standardize their mode of treatment.

Although the Jamaican upended traditional geographies of medical interpretation, he did not overturn hardened and socially-based hierarchies of medical authority. In terms of their occupational and legal identities, Dancer's sources mirrored the stratifications characteristic of elite medicine, which placed physicians at the apex of medical skill, expertise, and wisdom, followed by surgeons, then apothecaries, and finally non-white and non-male healing adepts. (See Table 1). Dancer's citations appeared in dialogue with forty-nine different diseases discussed in the body of the text. There were a

total of 467 citations. Examination of all of Dancer's citations reveals his heavy reliance on physicians. The preponderance of citations to physicians reflected the fact that in the eighteenth-century medical world, physicians theorized. But in setting down the ostensibly immutable hierarchies and philosophies of disease, physicians, particularly those in the British Isles, functioned as convenient straw men against whom Dancer evaluated new ideas and observations offered up by laypeople and other practitioners in the West Indies. That eighty-two percent of his citations named printed sources of information also reflects the status of print as the mode of rationalized communication (See Table 2). To be sure, Dancer chalked up a large proportion of his knowledge, eleven percent of his citations, to his own personal experience or the firsthand observation, (four percent) of others. But the materials Dancer invoked—printed books, journal articles, word-of-mouth observations from physicians, and newspapers—replicated the hierarchy of medical authority pervasive among elite medical faculties of the Anglo-Atlantic.

TABLE 1. Legal and Occupational Categories of Sources Cited in *The Medical Assistant* (1801)

Person Type	**Citation N =467**	**Percent Total**
Ancient Authority	6	1.2
Civilian	21	4.4
Historian/Natural Historian/Travel Writer	13	2.7
Indian	2	0.4
Physician	387	**82.8**
Slave	1	0.2
Surgeon	15	**3.2**
Unknown	22	**4.7**

TABLE 2. Types of Materials Cited in Dancer's *The Medical Assistant* (1801).

Citation Type	N=467	**Percent Total**
Book	298	**63.8**
Common Knowledge	4	0.9
Journal Article/Newspaper/Medical Thesis/Short Pamphlet	86	**18.4**
Personal Experience	52	**11.1**
Word of Mouth	19	**4**
Unknown	8	1.71

Dancer's citations demonstrate his sustained engagement with the ideas of imperial medical men and the literature they produced on the identification and classification of tropical fevers. The first evidence for this is the geographic location of Dancer's sources of information. The geographic origin of the authors listed in the 467 citations in Dancer's book falls fairly evenly between traditional centers of medical calculation in the British Isles and Europe and these region's colonial outposts. Nearly one half of Dancer's citations referred to authors from the British Isles and Europe (49%). The other half (44.8%) referenced authors whose primary subject matter was based on their experiences in the Caribbean, the East Indies or North America (See Table

3). Caribbean authors (primarily Anglophone) comprised 37% of the colonial sources. The majority of Dancer's citations (82%) referenced eighteenth-century physicians. The wisdom of the ancients, medical authors like Hippocrates and Galen, constituted only 1.2% of Dancer's citations. Dancer's text attempted to resolve questions raised in the works of contemporary medical authors. While classical authorities informed Dancer's medical thought, Dancer's methodology primarily involved weighing contemporaries' observations and theories from different parts of the globe against one another.

TABLE 3. Geography of Dancer's Citations in *The Medical Assistant* (1801)

Region	**N=467**	**Percent Total**
U.K./Europe	231	49.4
West Indies	174	37.2
North America	24	5.1
East Indies	12	2.5
Unknown	26	5.5
Grand Total	**467**	100

Dancer's pretention to conclusively articulate the etiologies of West Indian maladies and inscribe them within classificatory hierarchies called for the insights of practitioners and laypeople who had witnessed these maladies firsthand *and* experts engaged in the work of philosophizing these diseases' causes and behavior. Fittingly, the five authors Dancer cited most frequently were deeply engaged in nosology (see Table 4). Sauvages and Darwin both employed the Linnaean botanical taxonomic system to formulate new methods for classifying a range of diseases. The other physicians Dancer cited were known throughout the Atlantic for their work on yellow fever, a disease that

had long elicited taxonomic discussions about its identification and placement. Yellow fever polemicists upended extant disease hierarchies by calling attention to the insufficiency of current methods for identifying and classifying yellow fever and other maladies frequent in the Caribbean. The physicians listed in Table 4 had mounted challenges to the epistemological status of elite medicine in British Isles and its schematic hierarchies of disease. In citing their works and setting their theories against the first-hand observations of West Indian practitioners and laypeople, Dancer gauged the state of and modified contemporary nosology, brought lay taxonomies of disease up to speed, and entered into conversation with some of the most eminent medical thinkers of his time. The individuals in Table 4 did not directly address all of the diseases discussed in Dancer's text. Rather, these authors' work on nosology and fever generated the principles of new disease classification schemes. Their intellectual labor laid the groundwork for Dancer's description of a variety of tropical maladies and his improvised inscription of them into novel disease taxonomies.

TABLE 4. Authors Dancer Cited Most in *The Medical Assistant* (1801)

Rank	Name	Location	Specialty	Percent of All Citations	N=414 Citations
1	Dancer, Thomas	West Indies	Fevers, Botany	12.8	53
2	Rush, Benjamin	North America	Fevers, Nosology	2.9	12
3	Darwin, Erasmus	British Isles	Animal Taxonomy, Nosology	2.5	11
4	Sauvages, François Boissier de	France	Nosology, Botany	2.1	9
4	Hillary, William	West Indies	Fevers	2.1	9
5	Blane, Gilbert	West Indies/British Isles	Fevers, Scurvy, Miasma	1.9	8
5	Moseley, Benjamin	West Indies	Fevers	1.9	8
6	Clark, James	West Indies	Fevers, Botany	1.7	7
6	Home, Francis	British Isles	Fevers	1.7	7
6	Jackson, Robert	West Indies	Fevers	1.7	7
N/A	Others	N/A	N/A	68.3	283

The diseases to which Dancer applied the insights of the various taxonomists, fever theorists, and nosologists were those that many argued required entirely new modes of treatment and approach because these ailments behaved so strangely in warm climates. Dancer cited heavily when discussing the diseases that had been, at the end of the eighteenth century, subject to intense debate and investigation.[65] These diseases also tended to be of the greatest interest to his West Indian readerships because their behavior was so dramatically different in torrid climates than in temperate zones. For the most

[65] The main section of Dancer's book contained 467 citations. This number does not include informational footnotes where Dancer did not reference any specific person or personal experience but instead continued his discussion or provided additional advice without mentioning the source of his information. In the main section, Dancer listed and described the behavior of 49 different diseases common in the West Indies. The list included maladies such as yellow fever, tetanus, poison, dysentery, consumption, yaws, dirt-eating, diseases of women, surgical complaints, burns, and leprosy.

heavily referenced maladies, Dancer combined the philosophical tenets of traditional medical authorities with the insights of imperial medical men and used this information to measure and make sense of the observations of ordinary West Indian practitioners. In so doing, he incorporated the vernacular understandings of a handful of tropical maladies in order to refine extant medical knowledge.

Dancer's citations function as a yardstick to measure eighteenth-century readers' and theorists' preoccupations with specific ailments. Quantitative analysis of the number of citations for each disease reveals that fevers, poisons, and plantation maladies as the diseases prompting intellectual turmoil among the Atlantic's medical elite and as the disorders upending the daily life and the somatic worlds of British West Indians.[66] (See **Table 5**) Fevers loomed largest in the thinking of Caribbean residents, a disorder that comprised 30% of all of the book's citations.[67] Poisons were also significant and puzzling menaces: approximately 11% of all the citations in the book were linked to Dancer's entry on poisons. I have grouped yaws, dirt-eating, locked-jaw, and ulcers under the artificial category of "plantation maladies." Plantation maladies comprised 9.8% of the

[66] "Fevers" and "Plantation Maladies" are my own designations. Dancer's book contains a chapter titled "fevers" and the "fevers" category here contains all the citations for the entries listed in this chapter. Dancer did not use the term "plantation maladies" anywhere in his book. There was no separate chapter for ailments that tended to affect large plantation populations. The "plantation maladies," category includes all citations linked to Dancer's entries for "dirt-eating," "yaws," "locked-jaw," and "surgical complaints-ulcers." I have grouped yaws and dirt-eating under the category of plantation maladies because they were perceived by contemporaries to affect plantation slaves exclusively. "Locked jaw," and "ulcers," plagued all races and classes of people in the West Indies but Dancer and other medical authors writing about illnesses on large estates, including Benjamin Moseley, James Grainger, and later, David Collins all discussed these ailments in terms of their effects upon large plantation populations and included slaves in their case studies. For these reasons, I have included locked jaw and ulcers under the heading of plantation maladies. Yaws appeared as an individual entry in Dancer's chapter titled "cutaneous complaints." Dancer designated ulcers as a separate section in his chapter titled, "surgical complaints." "Locked-jaw," appeared in his chapter titled "Tetanus." "Dirt-eating" was a separate entry in the chapter titled "Bowel Complaints Frequent in the West Indies."

[67] Dancer's "fevers" chapter listed and described five different forms of the disease: "intermittent fever," "malignant fever," "yellow fever," "inflammatory fever," and "low nervous fever." Approximately 44% of all citations in the Fevers chapter (80) referenced the yellow fever entry (35).

text's references. When combined, Dancer's discussions on fevers, poisons, and plantation maladies generated 51% of all of the book's citations.[68]

West Indians generated a spate of observations and printed publications in their attempts to corral the devastation wrought by fevers, poisons, and plantation maladies. The numbers of publications West Indians produced and Dancer cited in reference to fevers, poisons, and plantation maladies rivaled, in quantity, the amount of material Dancer referenced that had issued from Britain. Among the three disease categories, British medical authorities held the most significance in the interpretation of poisons. In his discussion of poisons, 49% of the citations referred to authors whose primary orientation derived from their experience in either Britain or France. British and European medical men held less weight for Dancer in his analysis of fevers. Hence for instance, metropolitan authors appeared in only 28% of Dancer's fever citations, whereas West Indians made up just over half (51.2%) of his sources. This trend follows what scholars of medicine have argued in reference to shifts in the geography of medical interpretation in the Atlantic during the late eighteenth century. This literature claims that imperial medical men contributed to the "reform" of British medicine through advocating the importance of empirical investigation.[69] However the trend I have identified here limits scholars' claims about the importance of imperial medical men to the study of fevers. In the spate of publications surrounding the identity and contagiousness of yellow

[68] For the remaining of Dancer's 467 disease citations not discussed above the breakdown of citations, expressed as a percentage of a whole, to a specific malady is as follows: Dropsy 5.3% (25); Tetanus 5.15% (24); Consumption 5.15% (24); Dysentery 15% (3.12); "Other," 43.13% (201). Note I have artificially created the category "other" as a catchall term which includes a range maladies such as indigestion, asthma, cancer, influenza and ailments identified by their effect on the individual part of the body such as "nose bleeds." Dancer's book had sections describing all of the maladies grouped under "other" but they were not heavily cited. Because the number of citations for the diseases listed in "Other" constituted a very small amount of the total percentage of citations I did not separate them out as individual disease categories.
[69] Harrison, *Medicine in an Age of Commerce and Empire*.

fever, imperial medical men in the East and West Indies as well as practitioners in North American claimed that their first-hand observation of the disease made them better placed than their European counterparts to identify yellow fever as either a bilious, putrid, or inflammatory complaint, but their geographic proximity to fever did not give them the ammunition to challenge the authority of metropolitan medicine in its entirety.

Dancer's discussion of fevers gave East Indian sources the short shrift. Only 3.75% of his citations reference East Indian fever writers a quantity that stands in contrast to Dancer's reliance on North American authors, who represented 12.5% of the fever citations. This discrepancy conflicts with what Harrison's account of the intellectual affinities between East and West Indian practitioners. Although he is but one individual, Dancer's prominent stature within the literature on febrility that was emerging in the British Empire makes his indifference to East Indian practitioners telling: it represents a departure from the close affinities between East and West Indian practitioners that Harrison has argued were cemented in the eighteenth century by the practitioners' common penchant for intellectual and religious dissent. In so far as Dancer's description contributed to knowledge about yellow fever's place in the natural order of disease, Dancer's citations make clear that he relied upon Atlantic rather than British imperial networks information to reach this conclusion. [70]

[70] In the body of the text, Dancer described yellow fever as a bilious disease. Dancer, *The Medical Assistant* (1801), 77-85.

TABLE 5. Geography of Authors cited in *The Medical Assistant's* (1801) discussions of Fevers, Poisons, and Plantation Maladies

	Fever N=80	**Poisons N=51**	**Plantation Maladies N=46**
Location of Author	As Percent	As Percent	As Percent
Britain/Europe	28.7	49	23.9
West Indies	51.2	35	65
North America	12.5	1.9	4.3
East Indies	3.75	3.9	4.3
Unknown	3.7	9.8	2.1

For the material underwriting Dancer's understanding and description of fevers and plantation maladies Dancer owed his greatest debts to West Indian informants. Although white accusations of slaves' poisoning them and other slaves was extremely common in the Caribbean, the interpretation of how poisons operated on the human body remained part of the specialty of European and/or British authors. But when poisons are combined with fevers and plantation ailments, West Indians comprised 50.2% of Dancer's sources and British and European citations totaled 33 per cent. His reliance upon West Indians reflected the intellectual consequences of imperial medical men's fever debates; these contests recalibrated the balance of interpretive power on matters of fever in favor of colonial practitioners and diminished the epistemological weight traditionally afforded to medical faculty in the British Isles. Of the 166 citations to West Indian sources, 22% referenced fevers, 18% referenced plantation maladies, and 11% linked to Dancer's discussion of poisons. Fifty percent (84) of the total number of

references to West Indian sources (166) were in reference to these diseases.[71] Dancer's orientation towards West Indian informants in these three disease categories overturned the usual geography of medical hierarchy in the Atlantic world, but he conformed with tradition in terms of the types of individuals he consulted and cited. Like many medical authors, Dancer cited primarily physicians.[72] The high proportion of citations to physicians relative to other types of informants is consistent with what we know about physicians' occupational practices—they published in print. But these numbers are surprising given Dancer's geographic location as a West Indian—a region where surgeons far outnumbered physicians.

Dancer measured new observations on disease, provided by individuals of various ranks, ethnicities, and professions, against the wisdom of eighteenth-century physicians, the accepted authorities of medical knowledge. In so doing, he deliberated over and critiqued ideas about the progress of disease and its treatment formed by practitioners in the British Isles. In turn, he commented on the merits of older medical authorities through invocations of new information coming from his and others' first-hand experience with illness in the West Indies. Analysis of the content and function of the footnotes in relation to the claims made in the body of the text brings to the fore the dynamics of Dancer's process of updating and translating medical knowledge.

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[71] West Indian authors weighed in on 34 of the 49 diseases described by Dancer. Outside of Fevers, poisons, and plantation maladies, leprosy was the other disease category that elicited references to West Indian informants. Of the 166 instances when Dancer cited West Indian sources of information, 7.22% were in reference to leprosy.

[72] Hence, for example, in his section on fevers, physicians constituted 91% of all of his sources and 89% of his West Indian informants, for poisons, physicians comprised 66% of all of his sources and 61% of all the West Indian informants. For plantation maladies, 84% of his citations referenced physicians and 86% of his references to West Indian sources in this section linked to information provided by physicians.

The citations appearing in each chapter not only reflected his transplantation of long-standing technical medical debates. They also refereed different opinions and stabilized the conclusions he drew and the recommendations he made in the text. The copious footnotes populating the margins of *The Medical Assistant* thus created what scholars refer to as a double narrative within the same text.[73] In the body, Dancer outlined different maladies and their appropriate remedies. In the footnotes meanwhile, Dancer named and critiqued his sources. In so doing, he engaged in a performance of transparency and deliberation and underscored the arduous intellectual processes of reading, comparison, and adjudication he undertook before committing to the depictions and therapies he set out in the body of the text.

Dancer's citations demonstrated his sustained engagement with ancient and contemporary medical authors. Yet running commentaries throughout the footnotes made clear that he mediated between competing metropolitan, North American, East Indian, and Caribbean classifications of disease and their cure. In his discussion of "yellow fever," for example, Dancer recommended the accepted cure of rest, clysters, jalap dissolved in liquid, and finally, "small doses of antimonial powder." After a night of rest and medications, Dancer advised caregivers to "let the mercurial frictions be commenced." Those nursing the sick should apply "two drachms or one half ounce of the mercurial ointment rubbed into the inside of the knee and thighs every three hours." " The quantity of mercury required to be rubbed in, and calomel taken, is sometimes very

[73] Anthony Grafton, *The Footnote* (Cambridge: Harvard University Press, 1997). This reading of Dancer's footnotes draws from the argument Eileen Cheng makes about Thomas Hutchinson's use of the same literary technology in "On the Margins: The Mediating Function of Footnotes in Thomas Hutchinson's *History of Massachusetts-Bay*," *Early American Studies* (Winter: 2013): 98-116.

considerable," he finished. Lest this method give readers pause, Dancer's footnote accompanying this text justified his advocacy of this extreme and uncomfortable method. "More than one thousand grains of calomel have in some cases been given, and several ounces of mercurial ointment rubbed in," Dancer boasted. The footnote continued and informed readers that:

> "Dr. McLarty, himself took two hundred and seventy grains of calomel in five days, and rubbed in two and a half ounces of ointment. In the case of William Gow, mentioned by Dr. Chisholm, five thousand seven hundred and four grains of mercury were given, and the patient recovered. Dr. B [Dr. Francis Rigby Brodbelt of Kingston] says, that he has seen calomel, when given in large quantities, pass by stools unaltered."[74]

Using footnotes, Dancer subsumed highly technical and contentious debates over the behavior of fevers to the margins of his text. This work liberated the body of the text for Dancer to engage in a more straightforward and practical discussion of these diseases and their mode of cure.

Thus while citations to contemporary printed authorities allowed Dancer to update and refine extant medical knowledge, they also enabled Dancer with the space to vernacularize many of his claims. In the body of the text Dancer listed the most common causes of disease, the types of people it tended to afflict, and the ailment's most common

[74] Dancer, *The Medical Assistant* (1801), 85, 86 fn. "Dr. B" in Dancer's quote referred to Dr. Francis Rigby Brodbelt, an eminent Jamaican physician who lived in Spanish Town. In 1777 Brodbelt partook in a committee appointed by the Jamaican Colonial Assembly to investigate the medicinal properties of the mineral waters in Bath, St. Thomas in the East Parish, Jamaica. He also wrote on enduring effects of mercury medicines. Francis Brodbelt, "Case of the Mercury Deposition upon the Bones," *Memoirs of the Medical Society of London, Instituted in the Year 1773*, Vol 5 (1799): 112-119. On Brodbelt's appointment to the Bath committee see Dancer, *A Brief Account of the New Settlement and Bath, at Port Henderson, to Which is Added, A short Essay on Cold Bathing; Recommending and directing the Proper Application of it, under the Diseases of Warm Climates* (St. Jago de La Vega, 1777), 16. Brodbelt was also a correspondent of Benjamin Rush. See Brodbelt to Benjamin Rush, 25 June 1783 in Rush MS, Vol 25, f. 69. In 1797 the Jamaican Colonial Assembly jointly paid Brodbelt and Lee £100 for their attendance to the prisoners in the Spanish Town gaol in 1796, see Colonial Assembly of Jamaica, *Votes of the Honourable House of the Assembly of Jamaica* (St. Jago de La Vega: Alexander Aikman, 1797), 141.

symptoms. In the footnotes, however, he elaborated on his broader claims, often providing specific local details, placing, for example, the behavior of a given malady within a specific topography. Dancer updated the physician and fever theorist William Hillary's classification of a specific type of throat ailment as distinctive to Barbados by invoking the more recent appearance of this malady in Jamaica. "A species of sore-throat has occurred in this town [Kingston] that does not appear to be, strictly speaking, either of the inflammatory or putrid kind, but somewhat, though not entirely, resembling the Apthous Affection described by Hillary," a footnote read at the end of his entry on sore throats.[75] By citing his own observations and William Hillary's work on the weather and diseases of Barbados, this, and other footnotes like it, updated the current store of information on the variety of local diseases. Other footnotes listed different iterations of well-known diseases and located their pervasiveness in specific zones in the Greater Caribbean. Tetanus he explained in the body of the text, was "sometimes brought on by an exposure to cold, or to sudden stoppage of perspiration." In the footnote Dancer qualified this claim. "Tetanus from cold," he continued, "is more frequent in Carolina than in the West Indies." "See Dr. Linning and Chalmers, *Medical Essays,*" he closed.[76]

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[75] Dancer, *The Medical Assistant* (1801), 119 fn.

[76] Dancer, (1801), 194, fn. John Lining and Lionel Chalmers were both South Carolina physicians known throughout the Atlantic word for their expertise on a range of maladies including fevers, smallpox, and tetanus. Lionel Chalmers had an extensive correspondence network that included the London physician and smallpox inoculation proponent James Kilpatrick; the Quaker physician John Fothergill; the pneumatic chemist John Huxam; the Philadelphia physician Benjamin Rush; and the Edinburgh physician John Whytt. For the Kilpatrick and Fothergill portions of Lionel Chalmers' correspondence network see Diane Sydenham, "Medical Professionalism in Colonial Carolina," in Roy MacLeod and Milton Lewis, eds., *Disease, Medicine, and Empire: Perspectives on Western Medicine and the Experience of European Expansion* (New York: Routledge, 1988), 139-155. For Chalmers publications see: "Of the Opisthotonus and Tetanus" *Medical Observations and Enquiries*, 1(1757): 87-88; idem, *Essay on Fevers* (London, 1767); idem *An account of the weather and diseases of South-Carolina* (Printed for Edward and Charles Dilly, London 1776). John Lining was best known for his work on fevers, particularly his work correlating his observations on the virility of a certain fever with the local weather. See Lining, "Extracts of two Letters from Dr. John Lining, Physician at Charles-Town in South Carolina to James Jurin, M.D. F.R.S, giving an Account of Statistical Experiments Made Several Times in a Day Upon Himself," *Philosophical*

This type of footnote provided greater geographic specificity on a maladies' prevalence, appearance, and behavior than was possible in the body of the *The Medical Assistant* or through citations to older printed works on the subject.

Indeed, Dancer maximized the footnote's capacity to localize his claims for specific regional readerships, often citing a local persona in his footnotes in order to achieve this effect. In these instances Dancer used the space to provide additional recommendations, observations, and consumer information specific to his Jamaican readerships rather than to critique or question extant medical knowledge. Most of Dancer's oral accounts performed this function, and they included anecdotes, case studies that he collected first and sometimes secondhand from well-known Jamaican medical personae as well as elite patients. "A treatment of these diseases, by calomel and opium is recommended by Dr. Hamilton of Lynn Regis," (a small community in St. James Parish) Dancer explained in a footnote on pleurisy. "This practice," he continued, "we learn from Dr. Wright [another public military physician and botanical savant in the Island], has been long in use with Dr. Drummond in Westmoreland."[77] References to practitioners who had successfully used potent compounds in parishes with distinctive microclimates further particularized the cure to a specific environment. Simultaneously, these

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Transactions (1768-1775), 42 (1742-43): 491-509; idem, "A Letter from Dr. John Lining at Charles-Town in South Carolina to James Jurin, M.D." ibid., 43 (1744-45): 318-330; idem, "A letter from Dr. John Lining to C. Mortimer, M.D. Sec. R.S. Concerning the Weather in South Carolina," ibid., 45 (1748): 336-344; idem, "A Letter from John Lining M.D. of Charles-Town South Carolina to Rev. Thomas Birch, D.D. Secr. R.S. Concerning the Quantity of Rain Fallen There from January 1738 to December 1752," ibid., 48 (1753-54): 284-285; idem "Extract of a Letter from John Lining, M.D. of Charles-Town, in South Carolina, to Charles Pinckney, Esq., with answer to several queries sent him concerning his experiment of Electricity with a Kite," ibid., 48 (1783-54): 757-764, idem, *History of Yellow Fever* (London, 1753); idem, "A Description of the American Yellow Fever," *Essays and Observations, Physical and Literary, read before a society in Edinburgh, and published by them,* 2 (1756): 370-398. In South Carolina, Chalmers and Lining formed a medical partnership from 1750-60. In 1754 the Colonial Assembly of South Carolina paid the two £20 for their attendance on Cherokee Indians. See J.H. Easterby, ed. *The Journal of the Commons House of Assembly of South Carolina,* 10 (Columbia, Historical Commission of South Carolina, 1951), 308.

[77] Dancer, (1801), 116 fn.

endorsements from well-known Jamaicans universalized the medicine's potential across the island. Dancer's use of oral sources in the footnotes not only localized the broader claims he made within the body of the text, it cemented the utility of his observations to his geographically proximate readerships.

Most of Dancer's citations to oral sources corrected well-known therapeutic ideas. A handful of references to oral sources reassured readers of the safety of novel pharmaceuticals Dancer prescribed in the body of the text. "Laudanum in large and repeated doses, according to the effects it produces," was recommended by Dancer as a medicament for tetanus. Dancer specified that the patient should receive "no less than fifty to one hundred drops," of Laudanum, "every hour or two, but if it produces no effect in these doses, it will be needless to urge it to the extent mentioned by some authors," he concluded.[78] The footnote to this passage Dancer cited both a well-known local practitioner and a case study printed in a metropolitan medical periodical. "Dr. McViccar Affleck, to whom I am indebted for many valuable observations, assures me that in the above-mentioned dose, he has in many cases, very happily succeeded."[79] "In the *Medical Commentaries*," Dancer continued, "there is a case mentioned, where the patient took in the space of seventeen days, 1,500 grains."[80] Thus, Dancer used the footnotes to elaborate upon the claims made in the body of the text with anecdotes drawn from the West Indies. This tactic brought vital information on the dosage and administration of specific drugs, which military and naval medical officers had generated in garrisons and on vessels, to plantations and other spaces of lay medical practice.

[78] Dancer, (1801), 194.
[79] Ibid., 194-195, fn.
[80] Ibid., 195, fn.

A number of footnotes provided readers with additional practical and often highly partial information on the *purchase* rather than the properties of different medicines and medical devices. A footnote joined to a discussion on the cure of kidney stones for example, informed readers that the apparatus Dancer recommended "may be had of Mr. Menzies, and other druggists," in Kingston.[81] Other addendums suggested how readers could substitute local flora for formal medical equipment. "When neither pasteboard or other splints can be got proper," one footnote in the chapter on surgical injuries began, "the spatha of the cabbage-tree palm, that is the sheath of the fructifications, or spike, serve excellently well for the purpose of splints, where procurable."[82] Dancer's citations not only functioned as a technology to mediate and substantiate truth-claims. In creating an additional space for informal yet important local information on the dose and purchase of various medicaments, these footnotes distanced the text from the erudite theory undergirding Dancer's knowledge and further positioned the book as a compendium of highly localized medical advice.

Taking a closer look at Dancer's citations in reference to plantation maladies illustrates the type of intelligence he gathered from large estates. If a close examination of the individuals providing data on the behavior and treatment of plantation maladies tells us anything about the channels through which this type of information moved, it is that it circulated orally.[83] Indeed, planters, surgeons, and physicians encountered these diseases at patients' bedsides, or more likely, in plantation hot-houses and relayed their

[81] Dancer, (1801), 248fn.
[82] Ibid, 303fn.
[83] Plantation maladies is an artificial designation I have made, under which I have grouped Dancer's discussion of yaws, ulcers, and dirt-eating and the citations therein.

observations conversationally, to other whites during moments of white sociability.[84] As illustrated in Chapter One, knowledge related to the behavior, progress, origins, and treatment of diseases such as yaws, dirt-eating, and ulcers moved about the island through conversation rather than print. And Dancer embraced oral sources of information without apology.[85] Dancer's first-hand observations and those relayed to him orally by other informants, whom he cited, accounted for the other 56% of his sources on plantation maladies. Plantation medicine did not account for any part of Dancer's income. He was an urban physician who derived his income from Kingston's elites. But he had plenty of sources to tell him about these ailments. Of the approximately half of the West Indian informants cited in reference to plantation maladies, 26.6% of these citations referenced individuals who derived their recommendations from observations made on plantations, 13.3 % from hospital experience, and 3.3%, from a military expedition.

In describing and classifying plantation maladies, Dancer employed a combination of his first-hand observations and the nosological works of Edinburgh physician William Cullen and French nosologist François Boissier de Sauvages (See Table 6). That Dancer combined British and French medical faculty known for their work in classifying disease with insights gathered from individuals working on the ground illustrates the ways he used formal medical classifications of these diseases as a background against which he compared these maladies' behavior as they were experienced and described by locals encountering yaws, ulcers, and dirt-eating. He did so not to challenge the place of these diseases in the well-known classificatory order

[84] Of the six known oral sources of information Dancer listed among his West Indian sources, two referenced planters, one a surgeon, and another two physicians.
[85] Of Dancer's thirty citations to West Indian sources for plantation maladies, only 43% referenced books or journal articles.

established by Cullen. Rather, Dancer worked first to position these diseases in relationship to Cullen's classifications. He then used local observations to further demonstrate the effects of hot climate, temperature fluctuations, and extreme humidity—environmental factors characteristic of many large estates in the West Indies—on the appearance, progress, and treatment of yaws, dirt-eating, and ulcers. In so doing, Dancer argued that these were not in fact distinctly new maladies. These illnesses were variants on known entities but they elicited different symptoms and followed a different pathological progress in the torrid zone. Once Dancer identified these diseases within extant classificatory orders and explained how climate altered their mode of operation, he proceeded to explain how practitioners and laypeople should approach their treatment. By pitching many plantation maladies as West Indian variants of well-known disease entities, Dancer emptied diseases such as yaws, ulcers, and, most significantly, dirt-eating, of their associations with the rigors of plantation labor. In so doing, he relocated disorders that were becoming fodder for anti-slavery argument from their politically problematic taxonomies into the ostensibly neutral classification scheme of elite British medicine.

TABLE 6. Authors Most Frequently Cited for Plantation Maladies in Dancer, *The Medical Assistant* (1801)

Plantation Maladies: Total Citations=46			
Name	# Citations	As percent of all Plantation Malady Citations	Rank
Dancer, Thomas	14	30.4	1
Sauvages, François Boissier de	3	6.5	2
Cullen, William	2	4.3	3
Dazile, Jean Barthélemy	2	4.3	3
Hillary, William	2	4.3	3

Dancer's footnotes testify to his deep understanding of the culture and material life characteristic of sugar estates in particular, qualities supporting the oral and experiential nature of his knowledge of plantation maladies and testifying to his allegiance to the dominant political economy of the island. In particular, Dancer's asides indicated his deep familiarity with the rhythms of sugar production. When discussing the recovery of the drowned for example, Dancer counseled readers to place the victim into a warm bath or to cover him with warm bricks or ashes. "In crop-time, in the West Indies," he continued in his footnote, "warm water can always be had from the still tank, or ashes from the stoke-hole."[86] Other tangents demonstrated the physician's surprising acquaintance with the material culture of the slaves populating the island's sugar estates. Dancer quibbled with the Jamaican physician Benjamin Moseley on the causes of the "dry bellyache," particularly Moseley's contention that it did not originate with exposure to lead. Dancer, in contrast, used enslaved peoples' lead-poisoning as an anecdotal argument against Moseley's theory. "Negro plumbers," he continued, "are in the custom

[86] Dancer, (1801), 309 fn.

of casting leaden spoons, the use of which is extremely dangerous."[87] Lead pipes were used in boiling houses to distill cane into rum and molasses on sugar estates throughout the Caribbean. Due to their wear and tear, lead pipes were replaced frequently. Slaves often repurposed these discarded pipes into metal ware, refashioning them into utensils that they used in the preparation of foodstuffs, a fairly subtle process of salvage and reuse that Dancer casually referenced in his observations on the environmental causes of dry bellyache.

Dancer's discussion of "locked-jaw" (tetanus) among infants and young children indicates the significant role played by Jamaica's planters in furnishing the author with anecdotes and reports on their informal observations. Like many other warm climate medical theorists, Dancer maintained that rapid changes in temperature was a major cause in variety of different illnesses experienced by the island's residents. Dancer believed that "obstructed perspiration," caused by rapid changes in temperature, precipitated the onset of locked-jaw among newborns. "The alterations of heat and cold to which negro children are liable in confined smoky huts, with broken walls, and in damp situations," explained the prevalence of this phenomenon on certain estates. These conditions, according to Dancer, "may frequently conspire in bringing on the complaint." Indeed, locked-jaw, as Dancer observed, was "much more prevalent on some estates and in some neighborhoods than others." "It has happened that," he went on, "on one estate they have lost almost all their children, whilst on another, contiguous to it, they lost hardly any." "The bleak and damp situations of the negro houses," on the first estate

[87] Ibid.,103 fn.

explained the predominance of tetanus, "for the treatment of children was the same," he finished.[88]

Yet just as certain plantations furnished dire examples of the concrete environmental causes of a specific malady, other exemplary operations provided Dancer with the evidence on its means of prevention. Dancer espoused a multi-causal explanation of tetanus. It was a disease that, as he put it, "will not be prevented by attention to the navel alone, or to any single circumstance." The experiences of "the delivering women, in a lying-in hospital, as is now customary on most large estates," confirmed Dancer's theory. On these exemplary estates, "where cleanliness is observed, where fires are prevented, where the navel is duly attended," tetanus, "which formerly prevailed among negro children," was greatly reduced. These experiments proved Dancer's claim that in paying "a strict attention to several circumstances collectively," tetanus, "may be rendered much less frequent."[89] Dancer's advice was thus very much informed by pieces of information that he gathered from Jamaica's resident planters and managers. By correlating these scattered examples with well-known ideas about the causes of tetanus maladies, Dancer used planters' experiences to make new medical knowledge.

Dancer did maintain criticisms of the plantation enterprise. At several points throughout the text Dancer acknowledged the profit-driven nature of the plantation economy and its impact upon medical practice. The commercial drive behind plantation operations, as Dancer argued, curtailed practitioners' ability to consider how the physiology of the individual enslaved patient shaped the behavior of a particular disease

[88] Dancer, (1801), 270.
[89] Ibid., 271.

and its cure. The cure of ulcers, for example, required practitioners to account for the "state of the discharge, the constitution and habit of the patient, etc." It was however, as Dancer noted, "seldom in the power of plantation surgeons," to heed these factors. The limits imposed upon an estate's surgeon and the scale of their practice explained why ulcers on plantations "are of such long duration and frequently become incurable."[90] It is clear that Dancer's vision of plantation medicine and the enslaved patient represents a significant turn away from the strategies of body management of mid-century described in chapter two.

Yet even as he acknowledged the limits of the large-scale cure of illness, in several portions of the text, Dancer provided recommendations specific to the care of large patient populations. The subtitle of Dancer's text described it "for the use of families and plantations," and throughout he positioned the work as useful to those charged with the care of many dependents. A description in the table of contents informed readers that the appendix contained "a list of medicines requisite for plantations and families, tables of weights, measures, and doses."[91] And he bragged that he had ample experience with large patient populations. Dancer began one narrative of his success with "during my attendance on a military hospital."[92] Dancer also worked to cement utility of his text to planters through the provision of information that would facilitate the cure of several patients at a time. "The custom of making the boiling-house [where cane was distilled into sugar, molasses, and rum] on estates a hospital, on occasions when there are great numbers to be inoculated, is a very good one," Dancer

[90] Ibid,293-294.
[91] Ibid, title page, 64.
[92] Ibid,91.

proclaimed. Yet the confinement of large numbers of variolated patients in a single space potentially spelled disaster, as their bodies sweated foul matter and thus polluted the air, causing further sickness. Thus the massive inoculation of slaves in the plantation distillery had to be undertaken with "certain regulations, which are necessary to hinder patients being either too much confined or too much exposed," Dancer explained.[93] In one section, on burns, he suggested the application of rags dipped in a mixture of water and vinegar. In the footnote elaborating on his recommendation, he vouchsafed for the cure's safety, explaining that "this is the application which has been long employed at the Carron Foundry in Scotland, where such accidents must inevitably and frequently happen."[94] By mixing anecdotes drawn directly from large sugar estates with those he gathered from other proto-industrial spaces where laborers were subject to a variety of industrial accidents, Dancer provided his managerial readerships with a variety of methods to scale up the cure and prevention of illness and physical accidents. Such framing devices and narratives positioned Dancer as a medical authority who understood the unique crisis of scale that planters believed themselves to be facing.

Publishers also recognized *The Medical Assistant*'s potential appeal to other groups of practitioners charged with healing the sick on a large scale. The book "is calculated to be of no less service on board every ship bound for the West Indies or Africa," a London bookseller noted, "as it contains advices for the prevention and treatment of the yellow fever, and all other tropical diseases, directions for the making up of medicines, simple and officinal," as well as "rules for the management of persons

[93] Dancer (1801), 154 fn.
[94] Ibid, 291, fn.

under various accidents of drowning, empoisonment, fracture, etc. etc."[95] And indeed, at least two institutions charged with the care of large patient populations found the book valuable. In North America, the New York and Pennsylvania hospitals purchased the book, adding it to their staff libraries.[96]

Dancer's work to scale up the management of illness staked out a middle-ground between two imperatives shaping his interpretation of plantation maladies. His framework adapted a focus on sickness as a discrete category of medical intervention to the commercial imperatives of plantation regimes and their model of body management. At the same time his suggestions modified older paradigms of elite medicine focused on the idiosyncratic body of the patient by employing frameworks based on urban hospital care, that, due to the scale of operations, discounted the differences between individual patients and instead focused on understanding and treating disease.

From the vantage point of a dusty plantation sick-house, where sickly slaves were ushered in and confined as part of their treatment, managerial staff desired information on the identification of disease so that they could embark on a plan for its treatment or cure. Yet in addition to information on how to identify a malady as a specific disease, the therapeutic discoveries made around the island and articulated in the erudite fever treatises authored by military and naval medical men seemed to hold promising results for plantation managerial staff.

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[95] Bookseller's advertisement for *The Medical Assistant* (1801) cut and pasted in Thomas Dancer, *Strictures on Dr. Grant's Essay on Yellow Fever* (London: Murray and Highley, 1802). Copy consulted at the Rare Book Room, Library of Congress, Washington, D.C.

[96] Pennsylvania Hospital, *Catalogue of the Medical Library of the Pennsylvania Hospital* (Philadelphia: T.A. Conrad, 1829), 53; New York Hospital, *A Catalogue of Books Belonging to the Library of New York Hospital* (New York: Printed by G.F. Hopkins & Son, 1829), Entry # 571, p. 46.

It his discussion of therapeutics Dancer best achieved the careful balance between plantation owners' urge to treat plantation slaves as a single population and his own training to examine the idiosyncratic constitution of the individual patient. To ensure its success among plantation attorneys and overseers, Dancer made sure that *The Medical Assistant* provided information for the treatment of illness on a large scale in addition to the apt description of maladies common to plantation populations.

In correspondence to urban druggists, planters, plantation managers, and plantation surgeons asked for information on the quantities of different ingredients to make certain compound medicaments for the consumption of large plantation populations. These repeated inquiries show that while knowledge about the *virtues* of different plants and their use had indeed migrated across different communities of military, urban, professional, and plantation medical practice, posology, the branch of pharmacy addressing the ratio of different medicaments in a given compound and their dosage for patients of different ages and sexes constituted one of the gaping holes in planters' medical know how. The plantation physician Thomas Skone of Tobago, for example, relied upon the London druggist William Jones to provide him with the "best way of using Calumbra root" for the 1,300 slaves under Skone's care.[97] Plantation management texts and domestic medical advice books often provided information on the cure of individual maladies and the preservation of large populations using this feature as a selling point. The Nevis surgeon Robert Thomas, for example, bragged that he had "upwards of three-thousand annually under my care as a surgeon," and his book, *Medical Advice to the Inhabitants of Warm Climates* included a "list of medicines recommended

[97] M. Watson, "Some Eighteenth-Century Trading Accounts," in F.N.L. Poynter, ed. *The Evolution of Pharmacy in Britain* (Springfield, Illinois: Charles C. Thomas, 1965), 45-77.

in the treatment of the diseases, and an explanatory table of weights and measures used by apothecaries."[98] The explanatory table in Thomas' appendix depicted apothecary's symbols and provided their equivalent in the number of grains for an individual dose. It also set out a table converting weight into liquids, the number of ounces in a pint for example. Thomas, like Dancer and many other domestic medical advice authors, intended their books to be cross-referenced and used alongside widely circulating pharmaceutical dispensatories. The proliferation of tables and charts in domestic medical advice texts facilitated laypeople's conversion of apothecaries' measurements and medicines to the materials of the household. Yet in spite of the availability of these technologies of translation, planters struggled more than ordinary householders to make these conversions because they entailed figuring out the treatment of illness en masse.

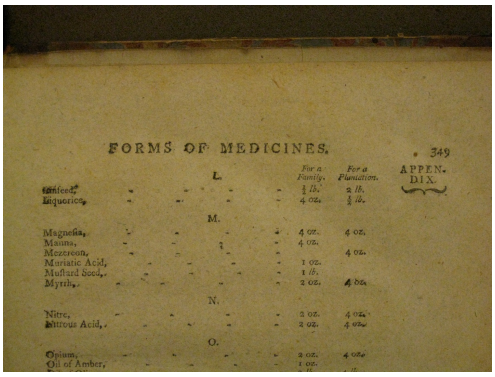
In the treatment of illness, planters and estate managers sought consumer information that would guide their purchase and preparation of medicaments on a large scale. In his appendices, Dancer provided information on the procurement and allocation of medicaments or their substitution with local simples on a scale suitable for British West Indian sugar plantations. Many domestic medical advice books contained appendices with tables of apothecary's weights and measures. Dancer expanded apothecaries' standard measurements and suggestions intended for individual families, to fit the exigencies of plantation healing. Dancer provided information on the quantity of drugs necessary to sustain a large-scale sugar or coffee plantation on an annual basis. His first appendix provided a "list of medicines." In this section, lists of ingredients for a domestic or family medical chest appeared on the left side of the page. The list was

[98] Thomas, *Medical Advice to the Inhabitants of Warm Climates,* 25, title page.

organized alphabetically, beginning with aloe and ending with verdigrease. Two tables of measurements, on the right side of the page, accompanied the entries for individual ingredients. These tables provided information on the quantity, in ounces, that heads of households should order when amassing ingredients for domestic medical chests. For example, how much jalap should one order if one were trying to outfit a family medical chest? How many lancets and clysters? The appendices of many domestic advice texts answered this question and provided tables indicating the amount of ingredient necessary if one were purchasing for "a family." Dancer's appendix contained this information. In addition his appendix contained a second table where he listed the amount, for each individual ingredient, necessary for "a plantation containing one hundred negroes."[99] (**Figure 2).** Thus the posological practices developed within military and naval hospitals made its way into the body of plantation medical knowledge as straightforward information on the acquisition and purchase of medicaments on a large scale.

[99] "Appendix A," in Dancer, (1801), 348.

Figure 2. Page Heading, "Appendix A," in Thomas Dancer, *The Medical Assistant* (1801), 349.


FORMS OF MEDICINES. 349

APPEN. DIX.

L.

	For a Family.	For a Plantation.
Linseed,	½ lb.	2 lb.
Liquorice,	4 oz.	½ lb.

M.

Magnesia,	4 oz.	4 oz.
Manna,	4 oz.	
Mezereon,		4 oz.
Muriatic Acid,	1 oz.	
Mustard Seed,	1 lb.	
Myrrh,	2 oz.	4 oz.

N.

Nitre,	2 oz.	4 oz.
Nitrous Acid,	2 oz.	4 oz.

O.

Opium,	2 oz.	4 oz.
Oil of Amber,	1 oz.	

Planters not only sought consumer advice on the amount of medicaments to be purchased for a specific plantation operation. They also desired techniques to expand the number of slaves they could treat with a limited quantity of medicine. It was especially important to retain the potency of various botanical febrifuges and antimonials they purchased, especially in circumstances when low supplies and high cost meant scarce ingredients were being stretched well beyond standard dosages. The military functioned as one profitable source of medical information for planters in this context because it shared with the plantation complex imperatives to treat illness in tropical climates on a scale unparalleled in any other stationary labor regime in the British Atlantic world. In this context, Dancer's work in military hospitals gave him experience substituting country simples for known chemical-based pharmaceuticals. His advice probably appealed to managers in a similar bind. "There are many substitutes for the bark (see country remedies appendix)," he explained. "During my attendance on a military hospital, there was once a scarcity of bark and I gave Mead's powder with great success

in intermittents, at that time prevailing."[100] Dancer called specifically upon his work in the military garrison because, as he narrated his innovation, he substituted one ingredient in a medicine for another on a large scale with no harm to his patients. What Dancer was providing to plantation readers, then, was not only information on which medicines to use in the treatment of specific diseases, but specific instructions for their procurement, measurement, and distribution across their estates to provide healthcare for large numbers of people.

Although steeped in erudite medical theory, *The Medical Assistant* assimilated the knowledge unleashed by yellow fever debates and critiques of extant taxonomies of disease and presented it in practical medical language. In his text Dancer not only translated his intellectual work of synthesis into vernacular descriptions of disease, he described how to use local botanicals and minerals as substitutes and alternatives to expensive, imported, compound medicaments. Most significantly, he set down methods for diagnosing and managing diseases specific to plantation economies located in warm climates. The practices Dancer described allowed plantation managerial hierarchy charged with the care of large enslaved labor populations to scale up cures for implementation on large estates.[101]

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[100] Dancer, (1801), 91.

[101] Research on the medicine scales in colonial contexts, including military garrisons, Royal Naval Ships, and plantations is an exciting field still in the process of development. One promising example is Christopher Lawrence, "Disciplining Disease: Scurvy, the Navy, and Imperial Expansion, 1750-1825," from David Philip Miller and Peter Hanns Reill, eds., *Visions of Empire: Voyages, Botany, and Representations of Nature* (Cambridge: Cambridge Univ. Press, 1996), 80-106. For work on large-scale medical practice and patient populations in urban contexts in the British Isles see Mary Fissell, *Patients, Power, and the Poor in Eighteenth-Century Bristol* (Cambridge: Cambridge University Press, 2002); Susan Lawrence, *Charitable Knowledge: Hospital Pupils and Practitioners in Eighteenth-Century London* (Cambridge: Cambridge University Press, 1996); Günter Risse, *Hospital Life in Enlightenment Scotland: Care and Teaching at the Royal Infirmary of Edinburgh* (Cambridge, Cambridge University Press, 1986); Kevin Siena, *Venereal Disease, Hospitals, and the Urban Poor: London's "Foul Wards," 1600-1800* (Rochester: University of Rochester Press, 2004).

III. Globalizing Plantation Maladies: The Medical Assistant's *Circulation in the Atlantic World*

Even as Dancer employed footnotes to showcase his deep familiarity with the plantation medical world and assure plantation managers of the congruency between their ideas and his elite medical training, Dancer also worked to place the book in the hands of the most vocal and prominent taxonomists of the Atlantic world. Dancer selectively gifted the book to prominent groups of agricultural improvers and elite yellow fever theorists in North America. In so doing, Dancer attempted to show how the importance of plantation medicine was not limited to those with economic interests in agricultural commodity production in the Greater Caribbean. His selective gifting of *The Medical Assistant* to diverse elites in North America offer a window into Dancer's larger connections and how Dancer leveraged the classificatory bent that united agriculturalists, medical men, and botanists for his own gain.

Following its publication, Dancer sent an author-inscribed copy to the Society for the Encouragement of Arts, Manufactures, and Commerce.[102] A group based in London, the Society's members promoted, in contrast to those of the Royal Society, the development of utilitarian scientific discoveries and maintained that mechanical, agricultural, and chemical advances would augment Britain's commercial strength. He also sent a personally inscribed copy with his own corrections to Benjamin Rush, the well-known American doctor, fever expert, and a highly celebrated faculty member at Philadelphia hospital and medical school. Although the editors of *The Medical Repository* had disparaged Dancer's scant contribution to the arsenal of yellow fever

[102] John and T.N., "Presents Received by the Society, Since the Publication of the Nineteenth Volume of these Transactions, with the Names of the Donors," *Transactions of the Society, Instituted at London, for the Encouragement of Arts, Manufactures, and Commerce*, 20 (1802), 396.

knowledge, Rush's treatment of Dancer's work and his placement of it in his library suggest the Philadelphia physician remained an enthusiastic fan of Dancer's intellectual contributions. Rush had his copy of *The Medical Assistant* rebound with the Tortola physician John Lettsom's *Reflections on the General Treatment and Cure of Fevers* (1772). [103]

The Agricultural Society of South Carolina also received a copy from Dancer along with his promises to send seeds from the Jamaica's botanical garden. South Carolina was a vibrant center for agricultural reform in the late eighteenth-century and the Agricultural Society was one of the state's most vocal and prominent organs of this project.[104] Dancer's work to engage this group through the exchange of seeds and botanical information prompted the group's endorsement of the text to the region's planters. In their report announcing Dancer's election as an honorary member of the Society, the group characterized Dancer's book as one "considered as well by the eminent physicians, as experienced planters in this country, to be particularly adapted for the cure of diseases incident to our climate." "It is important that every planter should posses it," they finished their announcement.[105] This report appeared in newspapers in Richmond, Virginia and a truncated version of the report, noting the Society had characterized the work as one "much approved and recommended," appeared in

[103] See Rush's copy of Dancer's *The Medical Assistant* (1801) at the Library Company of Philadelphia, catalogue # AM 1801 Dan 9043.Q.1 Rush. This copy included Dancer's corrections and personal inscription to the Philadelphia fever expert. Rush rebound his gift of *The Medical Assistant* with John Lettsom's *Essay on Fevers* in an expensive calf leather.
[104] The group maintained a "farm" outside of Charleston and its reports appeared in newspapers in Virginia, Philadelphia, New York, and Boston. On the scope and reach of the Agricultural Society of South Carolina in agricultural reform as well as its various projects and experiments see Cornelius Irvine Walker, *The History of the Agricultural Society of South Carolina* (Charleston, 1919).
[105] *Charleston Courier,* July 24, 1804, 3.

Massachusetts newspapers as well.[106] Dancer recognized the appeal of the work to communities of plantation managers and owners invested in the broader project to ameliorate plantation slavery through agricultural reform. Literally placing *The Medical Assistant* in circles of prominent medical, botanical, and agricultural individuals poised to endorse it, Dancer mobilized his considerable knowledge of West Indian diseases as a profitable selling point for the book's reception among plantation owners in the southern United States as well as among broader communities of the taxonomically inclined.

Booksellers promoting *The Medical Assistant* in the British Isles followed Dancer's lead and recognized the book's intellectual appeal as a text that had used contemporary nosology to identify and name the treatment for a number of tropical maladies. This strategy, however, positioned plantation owners and fever observers as distinctive groups of consumers. In one of their advertisements, Murray and Highley of Fleetstreet in London cited the book's endorsement from planters resident in the West Indies. One leaflet quoted an "intelligent and experienced planter," who characterized the book as an "important useful work," which "ought to be on every plantation and in every family throughout the West Indies."[107] By invoking the first-hand experience of individuals resident on estates, the London booksellers presumably sought to market the text as relevant to West Indian absentees. Yet even as they recognized this group as a potentially lucrative readership, Murray and Highley also framed *The Medical Assistant* as a comprehensive primer on diseases in the West Indies, one that could meet metropolitan readers' desire for accounts of yellow fever epidemics in tropical

[106] *The Enquirer* (Richmond, VA), August 8, 1804; *Salem Register* (Salem, Mass), August 13, 1804.
[107] Murray and Highley's leaflet advertising the availability of *The Medical Assistant* cut and pasted in Thomas Dancer, *Strictures on Dr. Grant's Essay on Yellow Fever* (London: Printed for Murray and Highley, 1802), np. Rare Books Reading Room, Library of Congress, Washington, D.C.

colonies.[108] Thus in another advertisement, Murray and Highley omitted their discussion of the book's utility to planters. Instead, they announced their intention to sell *The Medical Assistant* in boards bound with the British military physician James Clark's *Treatise on the Yellow Fever as it appeared in the Island of Dominica in the years 1793, 94, 95, 96* and a short essay by Mr. Brande the Queen's apothecary, in which Brande discussed his experiments with the noted remedy for yellow fever, *Cinchona Brachycarpa*.[109]

Other advertisements for the text illustrate Dancer, his publishers, and the text's booksellers imagined yellow fever experts and planters as part of discrete yet highly porous communities with overlapping pragmatic and philosophical interests. In the West Indies, Alexander Aikman, the publisher and printer for the first edition, marketed *The Medical Assistant* towards individuals charged with the care of large enslaved labor forces. In his newspaper, Aikman characterized *The Medical Assistant* as a book that "…ought to be on every estate in the island."[110] In North America, one bookseller and publisher, James Humphreys of Philadelphia, anticipated potential profits in putting out his own version of the book. Humphreys advertised in New York, Boston, and Philadelphia newspapers the possibility of putting out a cheaper, smaller, octavo volume

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[108] Pamphlets and short books describing and analyzing the causes of yellow fever epidemics in the tropical theaters of British warfare flourished in urban reading centers in the Anglophone Atlantic at the end of the eighteenth century. The majority of the authors writing these treatises were military and naval medical men who had witnessed the disease while participating in grueling West Indian land campaigns during the War of American Independence and the French Revolutionary Wars. See Harrison, *Medicine in an Age of Commerce and Empire,* 1-28 and op. cit 6.

[109] Murray and Highley's advertisement in *The Morning Chronicle* (London)*,* March 1, 1801. Jan Golinski probes metropolitan Britons' interest in weather recording and their use of weather data to interpret and the virulence and violence seasonal disorders. See Golinksi, *British Weather and the Climate of the Enlightenment* (Chicago: University of Chicago Press, 2007),137-169.

[110] Alexander Aikman's advertisement in the *Royal Gazette* quoted in Thomas Dancer, *Another Rowland for an Oliver* (Jamaica: 1809), 3, fn. Copy consulted at the Rare Books Reading Room, Library of Congress.

based on subscriptions. This local publication, Humphrey proclaimed, would significantly reduce the price of the *Medical Assistant,* from $14.00, the imported price of the London quarto edition bound in boards, to $4.00. Humphreys also recognized plantation owners as a potentially profitable readership. Although he advertised his subscription edition in newspapers spanning the Atlantic seaboard, he tailored his marketing strategy to fit preferences among the book's regionally diverse readerships.

Thus, for example, in newspapers reaching audiences in New York and Philadelphia, Humphrey's advertisement pointed out the similarities in the climate in the West Indies with those in the southern U.S. "That as so considerable a portion of the United States embraces a climate nearly similar to that of the West Indies, the value of such a work as this must be sufficiently apparent," he rationalized. Humphrey's Philadelphia and New York advertisements also made the book's treatment of the diseases specific to white and African inhabitants of the West Indies an additional selling point. "Not only the diseases to which the negroes in common with white people are liable and fully explained, and the best mode of treatment pointed out, but the complaints which are *peculiar* to the *African* race, are also particularly treated of," the bookseller explained. "In families and on plantations," he continued, "which are often too remote from the residence of physicians to admit of the attainment of medical advice sufficiently early….. access to such a work must be highly desirable."[111] Humphreys limned a considerably different picture of Dancer's book in the advertisement the bookseller placed in Boston's newspapers. The Boston advertisement listed the book's title and

[111] Advertisement of James Humphreys of Philadelphia in *New York Commercial Advertiser,* New York, NY., November 6, 1804, p. 3; *United States Gazette*, Philadelphia, PA., November 6, 1804, 3. A shortened version of Humphreys advertisement, providing only the title and price of the book, appeared in Boston's *New-England Palladium,* November 16, 1804, 2.

Dancer's position as the "late physician to Bath and Island Botanist," as well as Humphrey's proposal to publish a cheaper, subscription version of the book in octavo. But the bookseller omitted discussion of the book's coverage of the diseases of the West Indian climate. The varied marketing strategies employed to address diverse groups of subscribers and purchasers show Humphrey and Aikman envisioning southern plantation owners in the U.S. and those in the West Indies as significant potential readerships *alongside* the scientifically and taxonomically inclined in North America. The strategies of the book's vendors who marketed and repackaged the text in the British Isles and in North America demonstrate *The Medical Assistant's* portability among two audiences interested in the taxonomy in fevers and a variety of other types of tropical disease.

Conclusion

The history of the production of *The Medical Assistant,* as well as dissemination to different readerships throughout the Atlantic, brings to the fore the activities crucial to the process of formalizing and disseminating medical know-how gathered from the highly fraught and specific context of West Indian sugar plantations, the transformation of this data into reliable medical knowledge about the maladies in hot climates and their treatment, and the translation of this material into a prose and package accessible to readers of various capacities and stations. It shows not only the complicated intellectual context of fluctuating medical thinking in the late-eighteenth-century through which Dancer filtered his information. Excavating these processes as they occurred in a particular context also offers a window onto how practices such as collecting, distilling, refining, and organizing information—activities already well documented in other scholarly accounts of knowledge-making—were informed and challenged by the unique

conditions of the late eighteenth-century Greater Caribbean, a society under siege from abolitionist critique, slave insurrections, political upheaval, and intra-party dispute among medical men.

The Medical Assistant usefully integrated vernacular depictions of maladies and their cure created and circulated by laypeople on plantations with formal medical theories. Dancer's copious footnotes shows that the material that he had gathered and processed formed a collective body of knowledge and practice that were distinctive to the island, even if, as he argued in the body of the text, these practices and ideas could be broadly applied in the cure of illness throughout the torrid zone. The book was in his vision and those of its printers and sellers, a text that stored, preserved, and most importantly, *refined* medical know-how long honed and perfected by the island's whites, Africans, and creoles.

To be sure, Dancer's citations show that he derived his understanding of the cause and classification of individual diseases from formal medical texts written by ancient, contemporary, and Caribbean authorities. A large portion of Dancer's printed citations referenced mid-to-late eighteenth century fever theorists who had worked as military and naval surgeons in the torrid zones of the British Empire. Yet Dancer used these more elite materials to revise the vernacular medical knowledge possessed by laypeople. In his privileged capacity as a synthesizer of this erudite literature, Dancer also used the observations of ordinary Caribbean people to build upon, qualify, and sometimes challenge established axioms of tropical medicine through the inclusion of numerous informal, oral, and firsthand observations derived from non-elite personae in Jamaica. Although a number of these phenomena Dancer observed firsthand from his experience

as a practitioner of medicine, sizeable portion of the book's footnotes referenced the observations of laypeople.

Dancer's social networks shaped the type of text that *The Medical Assistant* became. His position as the physician to the Jamaican regiment, island botanist, physician to the military hospital in Bath and his close relationship with the island's largest sugar planters created chains of information extending between Dancer and the numerous attorneys, lieutenants, ship surgeons, estate managers, plantation surgeons, and enslaved drivers serving these elites.[112] A number of citations in *the Medical Assistant* suggest his deep familiarity with the agricultural rhythms and materials specific to sugar cultivation and that he made advice based on his understanding of these features of plantation labor. These groups supplied him with preternatural examples of illness, in which an acute disease plagued populations that it had never before affected, and case studies showing the successful use of previously unknown medicaments or new modes of their preparation. A number these local sources of information illustrated the causes and behavior of diseases, namely dirt-eating and yaws, that many held to affect only the enslaved populations in the Caribbean. Whereas maladies such as yellow fever had received ongoing investigation and debate in printed publications circulating throughout the Atlantic, these local diseases had yet to capture the widespread attention of metropolitan institutions of learning. The insertion of informal sources of information for these maladies suggests that in the absence of codified and printed knowledge, Dancer took a very inclusive and egalitarian approach in determining who and what counted as useful if not authoritative information.

[112] Dancer dedicated the second edition of his book to Simon Taylor, Esq. Jamaica's wealthiest sugar planter. See *The Medical Assistant* (St. Jago de La Vega: John Lunan, 1809), np.

Kingston's administrative position in Jamaica as well as the island's position as a crown jewel in the British Empire and its commercial and intellectual ties with larger the Atlantic world, particularly North America, enabled Dancer to use the port as a basis from which to collect traditional materials of knowledge making—medical dissertations, journals, periodicals, books, pamphlets, and newspaper essays, materials that he, in turn, integrated into his text.

Additionally, Dancer's close relationship with Kingston's booksellers and printers facilitated his purchase and perusal of several natural and civil histories of the Caribbean, South America, and the Dutch East Indies, texts which subsumed and occluded the labor of countless indigenous and African informants.

Dancer's explanation of ailments common in the torrid zone not only shows us the process through which a local practitioner collected knowledge from an array of sources. The book is emblematic of the types of work necessary to re-vernacularize this new knowledge in order to make it accessible to laypeople and to facilitate its implementation in a series of practices facilitating these disorders' eradication. His book aptly encapsulates the processes by which a vast corpus of therapeutic and pathological knowledge emerging from centers around the Atlantic world and within the West Indies was packaged and presented to readers working within the plantation sphere. The reason for the book's popularity amidst similar projects was its success in presenting the new knowledge on a variety of maladies, created out of Dancer's synthesis of vernacular and learned accounts, to laypeople who were either uninitiated into the behavior and treatment of disease in the West Indian climate or new to learned interpretations of these diseases.

Fever theorists throughout the Atlantic eyed plantations as sites they could mine for data that would allow them to further probe the whole order of disease. In such a context, North American booksellers as well as the book's vendors in the British Isles used the reputation of West Indies as a hotbed of fever theory to present the book as a taxonomic encyclopedia of West Indian disease. Such a strategy ensured the text's broad geographic appeal. Indeed, as advertisers' and Dancer's own tactics reveal, the book passed through and was ready by various groups of agriculturalists, fever analysts, natural historians and practitioners entrusted with the care and management of large populations. All of these communities of readers used taxonomy as an entry point into the study of the natural world. When John Mitchell, the editor of the North American periodical *The Medical Repository* identified, in his review of Dancer's text, "agriculture" as one of several human-made enterprises in the Caribbean subject to the predations of West Indian pathogens, he signaled the growing appreciation physicians throughout the Atlantic maintained for plantations as potential spaces of raw medical data, a project that Dancer's book accelerated. Knowledge about the diseases in the region and their mode of cure became an ongoing project, one in which formal medical axioms would be continually modified by local and informal observations. [113]

[113] Dancer continually consumed new printed, manuscript, and oral information related the behavior and cure of maladies in the region. As is evidenced by the growth in the number of footnotes from between the first (1801), second (1809) and third (1819) editions of the book, Dancer used or at least cited this information to modify his accounts and instructions. Future drafts will compare the volume, personae, and location of his references and informants for each edition of the text.

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CONCLUSION

In late 1794, William Macbeth, a Scottish surgeon in the sugar-producing region of what is now known as Guyana, identified a "singular affection of the urinary organs," and described it as a "troublesome disease…" that "…occurs frequently in this colony."[1] On the grounds that the affliction had not yet been described by anyone writing on the "...diseases of tropical climates, and it appears to me a singular disease.." Macbeth "thought it might be worthy of a place in the Edinburgh *Medical Commentaries,"* the foremost medical periodical in the British Isles. Baiting far-distant medical readers curious about the bodies of African and Afro-Creole slaves, the subtitle of Macbeth's article described the disease as one "common among the negroes in Demerary." Such a description positioned Macbeth's investigation as one in a spate of studies issuing from the Atlantic World's tropical plantation colonies, a burgeoning medical literature in which authors described ailments that were nearly exclusive to the region's overworked and underfed African slaves. Macbeth singled out the urinary disorder as one that affected principally the slaves "who inhabit the sea-coast of this colony," and argued that the cause of the disease was in the "bush-water, which is highly impregnated and deeply tinged with vegetable substances…" that was consumed nearly exclusively by the field hands who resided on estates that were within reach of the Atlantic's cooling sea breezes on the northeastern portions of the Demerara river.[2] In the pages that followed, the surgeon laid out the evidentiary basis upon which he grounded his classification of the ailment as a disorder distinctive to the colony.

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[1] William Macbeth, "A letter from Mr. William Macbeth, Surgeon in Demerary to Dr. Duncan, giving an Account of a Singular Affection of the Urinary Organs, common among the Negroes in Demerary" *Medical Commentaries for the Year M.DCC.XCV*, decade second, vol. 10 (1795): 232-246, quote p. 232.
[2] Ibid., 236.

Macbeth's single-origin etiology of the urinary disease of Demerara mirrors modern frameworks of medical casuistry, most notably germ theory and its argument for diseases as material entities that are ontologically distinctive from the human body. And yet Macbeth arrived at this conclusion only after a sustained engagement with what were thoroughly early modern ways of accounting for illness. Upon first encountering patients afflicted with painful urination, Macbeth investigated the potential constitutional origins of their symptoms: he surveyed the daily habits of the 150-200 enslaved sufferers he diagnosed and treated to determine whether their "manner of living" had worn down their constitutions and prompted dysfunction in their urinary organs. He took account of the "mode of life of the negroes in this country…" which he characterized as "somewhat different from that of those in the British colonies." Macbeth piled up evidence of slaves' salubriousness. The work regimes of Demerara's plantation slaves were "not so laborious" compared to that of the British Caribbean colonies; their food was "in greater abundance" than those in other plantation colonies. Their clothing consisted of "only a hat and a piece of cloth in manner of a T-bandage, for women hat and petticoat." The substandard coverage, Macbeth argued, actually helped rather than harmed. "In this dress they do not appear to be so much affected by the vicissitudes of the weather," he wrote. Because the field hands' constitutions ran naturally warmer, they did not experience the constitutional infirmities that developed when multiple layers of clothing inhibited a person's free perspiration.[3] The fact that the disease "known by the name of mal d'estomache," aka dirt-eating, "which is so frequent and so often fatal in the Windward Islands, is unknown here," further solidified his claims about the healthiness of the slaves

[3] Ibid., 237.

in Demerara and affirmed his conviction that the disease was not a constitutional disorder.[4]

The dissection of a recently arrived African man further buttressed Macbeth's claims and helped to differentiate the disorder as a urinary rather than a venereal disease. The enslaved patient, described as a "robust negro man, the property of Joseph Hamer Esq." suffered from the disorder for over a year. During the first four months of his symptoms, his case was initially misdiagnosed by other practitioners as gonorrhea and they forced upon him mercurial ointments, a standard treatment for venereal disease. This was not uncommon. Several practitioners, Macbeth narrated, mistook the complaint for venereal disease. By the time Macbeth was consulted, the enslaved man "complained of his mouth which was affected by the use of mercury," in addition to his painful urination and tender pelvic region. Macbeth prescribed balsam copabia [sic].[5] When the man's symptoms continued, the surgeon tried a mixture recommended to him by Dr. Crawford, "surgeon to the garrison of this place." It also had no effect. Ten months after the start of his painful urination, his submission to two rounds of mercurial treatments, and his use of Macbeth's medicines, the enslaved man "begged to be put into the hands of a black nurse, which was complied with at the request of his master." The woman nursed the man for three months with a decoction made from "a few simples." She might have alleviated his pain but she did not halt the progress of his ailment. He "became worse and was reduced almost to a skeleton," during the time he consulted her.[6] He died on the evening of the 19th of January 1794, "and the following morning [Macbeth] opened up the body."

[4] Ibid., 237.
[5] This was a resin extracted from the sap of the Copaiba Tree (*copaifera officinalis)*, a species native to Guyana.
[6] Macbeth, 241.

The dissection revealed a bladder with its walls enlarged, kidneys that were larger than normal, and a tumor that had distended the man's bladder. What Macbeth saw—both the disorder's resistance to mercurial treatments, its limited responsiveness to the copaiba bark mixture, and the distended state of the urinary organs—affirmed for him that it was a urinary rather than a venereal disorder.

The fact that few domestic slaves and only two white men sickened with the disease provided further evidence that the bush-water was to blame. When the two white people sickened with the ailment, Macbeth attributed their cases to long-term constitutional and hereditary infirmities. The first man who sickened, a colonist from Scotland relayed that he had a previous history of urinary ailments. The second white man, described as "a gentleman," informed Macbeth that his father and eldest brother were "both troubled with the calculus of the bladder." Both of the white men sickened at a time when the "rain water was scarce," and would have been forced to drink the bush-water. But, as Macbeth explained, there was little possibility that the two white patients had drank the bush-water straight and unadulterated. White people "in times of scarcity, when they are compelled to use it for any purpose," always filtered the water or mixed it with Madeira, claret, or other spirts that "may correct the tendency that this water may have to produce the disease." The domestic slaves who resided in Demerara's great houses also did not sicken with the disorder. Because they "live in a manner almost similar to the whites," that is, they did not drink unfiltered bush-water. The domestics' resistance to the urinary disorder conclusively proved Macbeth's etiology.[7]

[7] Ibid., 245.

Macbeth's investigative strategy and findings encapsulate the ways in which, from the practitioners' perspective, the tropical plantation colonies in the British Atlantic world—their groups of people with similar "manners of living," the possibility of dissecting their bodies, and the opportunities for observing and recording similar symptoms—facilitated the gradual movement away from conceptualizing illness as an imbalance or temporary departure from normal function and towards the development of a disease based model of illness. Although medical hagiographers position this shift as a hallmark of medical advance, the medical habits of thought that emerged from plantation society in the Greater Caribbean were far from progressive. This becomes clear especially when we consider their immediate effect upon enslaved patients, who, as a result of the enhanced authority elite medicine held in diagnosis, saw their capacity for self-determination in the analysis of their ailments and the means they could pursue to treat them drastically curtailed.

Elements of the larger transformation in medical thinking previously sketched by scholars, this dissertation has argued, were present and elaborated in the practices and habits of thought prevalent among plantation surgeons, white managerial staff, and enslaved adepts—who were involved in the management of health and sickness on plantations in the Greater Caribbean. It was on plantations where white managerial staff and plantation surgeons engaged in modes of thinking that grouped different ranks of slaves into populations. This way of thinking about illness causality, which was in full force on large estates by the last quarter of the eighteenth century, discredited the narratives that enslaved sufferers told about their illnesses. At the same time, however, older, humoral models of illness persisted among both whites and enslaved people in

plantation society. The durability of humoralism on plantations shows that the ascendance of the disease model was a much bumpier and haphazard process during the period and in the region under consideration than scholarship on the rise of medical empiricism in the British Empire has acknowledged. In establishing plantations as space for the imperfect elaboration of medical habits of thought and practices that we have come to associate with the shift in medicine towards a disease model, this project has used plantations to illustrate the middle ground between humoralism and disease-theory that characterized the medical ideas and experiences of both laypeople and experts during the long eighteenth-century.

When medical writers like Macbeth as well as plantation managerial staff collected and linked symptoms to "manners of living," they created new categories of disease. In the process, however, they also generated an analytic that linked certain diseases with populations. Far more historically significant than the classification of disease, this project has charted a new habit of conceptualizing the world of human illness in economic terms. It showed how the plantation Caribbean functioned as a space for the development of certain type of biopolitics—one in which medical and managerial writers constructed populations from different categories of working people, differentiated each by their "habits of living," and placed them in reciprocally determinative relationships with the diseases that plagued them. Medical writers analytically grouped subject and captive Africans and Afro-Creoles who worked in the fields on plantations into populations, referred to them as "negroes," differentiated them from other slaves and working people by the effects that their behaviors and working lives had upon their constitutions. It is significant that this construction of diseases and

the populations vulnerable to them occurred in the British Atlantic's tropical plantation colonies. It was widely well-known that material conditions that were part of the economic fabric of plantation slavery—malnourishment, over-exposure, exhaustion, and melancholy—drove the development of the distinctive diseases that plagued enslaved people. Medical writers and plantation managerial staff developing accounts of medical casuistry downplayed overwork, scanty clothing, and malnourishment in the etiologies of the ailments they described and classified. Instead, they blamed Africans' insufficient assimilation of European norms of hygiene and their repudiation of the rules that restricted their movements as the forces that caused disease outright. Or they attributed these same behaviors and hostility to the rules as the factors that produced melancholy and lack of vigor among enslaved people that enhanced their vulnerability to the Caribbean's endemic disorders.

In positioning the Greater Caribbean as a distinctive subsection of the Atlantic world, this dissertation has challenged scholars' reliance on traditional markers of centers of calculation. The frequent invocations of oral sources of information prevalent in letters, medical periodicals, and books documenting health and illness on large estates was emblematic of knowledge-making practices prevalent throughout the region. The tensions between enslaved patients, practitioners, healers, and overseers on large estates also capture the highly mobile, conflicting, and often controversial knowledges that these groups generated through encounters with illness, what had caused it, and how to treat it. Medical knowledge-making in the Greater Caribbean was thus violent. What got made was also subject to multiple layers of interpretation. Then too, record-keeping about ailments was difficult. The precarious and flimsy qualities of printed and manuscript

materials in the region mark as well as the haste with which cadavers decayed mark the ephemeral nature the physical materials of knowledge-making in the region. The acknowledged decay of objects and the dearth of certain types of written materials perhaps augmented the epistemological weight of other ephemeral evidences that were based on oral, eyewitness, manuscript accounts of events. The authority afforded to these less enduring materials became a defining characteristic of medical knowledge making in the region and goes far in explaining residents' open, frequent, and unabashed reliance on eyewitness and oral sources of information. And yet the susceptibility of informal oral and written materials to mismanagement and manipulation at the hands of enslaved healers, overseers, and patients, was also a central feature of medical knowledge making in the Caribbean.

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EDUCATION

Ph.D. Department of History, The Johns Hopkins University 2016
M.A. Department of History, UT Austin, 2007
B.A. Colorado College, 2002

PUBLICATIONS

Peer-Reviewed Articles

2010 "Rationalizing Disease: James Kilpatrick's Atlantic Struggles with Smallpox Inoculation," *Atlantic Studies,* 4, no. 7 (2010): 421-446.

2010 Claire Gherini et al. "The History of Atlantic Science: Collective Reflections from the 2009 Harvard Seminar on Atlantic History," *Atlantic Studies,* 4, no. 7: 493-510.

Non Peer-Reviewed Articles

2015 "Adjudicating Caesar's Cure for Poison," August 20, 2015 https://recipes.hypotheses.org/6419

2015 "Valuing Caesar and Sampson's Cures," August 18, 2015 https://recipes.hypotheses.org/6460

FELLOWSHIPS AND AWARDS

2015 The Johns Hopkins University, Baltimore, MD, Deans Teaching Fellowship

2014 The American Institute for the History of Pharmacy, Madison, WI, Short-Term Research Grant

2014 The McNeil Center for Early American Studies, Philadelphia, PA, Dissertation Fellowship

2013 Harvard University, The International Seminar on the History of the Atlantic World, Cambridge, MA, Short-Term Research Grant

2013 The Johns Hopkins University, Charles Singleton Center for the Study of Premodern Europe, Edinburgh, Scotland, Short-Term Research Fellowship

2013 The Library Company of Philadelphia, Philadelphia, PA, William H. Helfand Short-Term Research Fellowship in Early American Medicine, Science, and Society

2013 The Maryland Historical Society, Baltimore, MD, Wing History Short-Term Research Fellowship

2012 The Huntington Library, San Marino, CA, Andrew W. Mellon Short-Term Research Fellowship
2012 The Johns Hopkins University, Baltimore, MD, J. Brien Key Award
2012 The John Carter Brown Library, Providence, RI, Charles Watts Memorial Short-Term Research Fellowship
2012 The American Antiquarian Society, Worcester, MA, Tracy Joyce Short-Term Newspaper Research Fellowship
2012 Virginia Historical Society, Richmond, VA, Betty Sams Christian Short-Term Research Fellowship in Business History
2011 The John D. Rockefeller Jr. Library, Williamsburg, VA, Gilder-Lehrman Short-Term Research Fellowship
2011 American Philosophical Society, Philadelphia, PA, Friends of the American Philosophical Society Library Short-Term Research Fellowship
2011 Philadelphia Area Center for the History of Science, Philadelphia, PA, Short-Term Dissertation Research Fellowship
2010 The Johns Hopkins University, Baltimore, MD, Frederick Jackson Turner Travel Bursary
2010 The Johns Hopkins University, Baltimore, MD, Department of History Research Grant
2009 Harvard University, Cambridge, MA, The Atlantic History Seminar Conference Grant

CONFERENCE ACTIVITY

Panels Organized

2013 "Health and Healing in the Atlantic Torrid Zone, 1600-1800," 19th Annual Omohundro Institute Conference, Baltimore, MD June 13-15.

2011 "The English, the Body, and the Enslaved: Circuits of Knowledge in the Anglophone Caribbean," 17th Annual Omohundro Institute Conference, New Paltz, NY June 16-19.

Papers Presented

2016 " 'From Whatever Motive It Proceeds': The Politics of Dirt-Eating in the Anglophone Caribbean, 1763-1805," American Association for the History of Medicine, Minneapolis, MN, April 28-May 1.

2015 " 'A difference of housing, clothing, and turning out': The Evolution of Body Management Strategies in British Plantation America, 1750-1807," North American Council on British Studies Annual Conference, Little Rock, AK November 13-15.

2014 "Treating and Debating Yellow Fever in Jamaica's Credit Economy," Society for Historians of the Early American Republic, Philadelphia, PA July 17-20.

2013 "Materializing Medicine in Eighteenth-Century Jamaica: Cadavers, Case Studies, and the Complicated Nature of Yellow Fever Interpretation," McNeil Center for Early American Studies, On the Anvil of Labor History in the Revolutionary Era: Billy G. Smith and Fellow Artisans, Philadelphia, PA November 7-9.

2013 "Translating Military Medical Knowledge into a Plantation Medical Vernacular: Thomas Dancer's *The Jamaica Practice of Physic* (1801)," 19th Annual Omohundro Institute Conference, Baltimore, MD June 13-15.

2011 "Old Sharper's Cure: Thomas Thistlewood, Venereal Disease and the Social Relations of Healing in Eighteenth-Century Plantation Jamaica," Association of Caribbean Historians Annual Conference, San Juan, PR May 11-16.

2011 " 'Clapped Him Confoundedly': Thomas Thistlewood, Venereal Disease and Social Relations of Healing in Eighteenth-Century Jamaica," 17th Annual Omohundro Institute Conference, New Paltz, NY June 16-19.

2010 "Smallpox and Small Places: Localism and the Debate over Smallpox Inoculation in Charleston," McNeil Center Brown Bag Series, Philadelphia, PA January 28.

2009 "Rationalizing Disease: James Kilpatrick's Atlantic Struggles with Localism and Custom in the Early Years of Smallpox Inoculation," Working Paper No. 09-08, The Atlantic History Seminar Harvard University, Cambridge, MA August 3-11.

2009 "The Probability of Stopping the Distemper": Debating Smallpox Inoculation in Charleston," 15th Annual Omohundro Institute Conference, Salt Lake City, UT June 12-14.

Panels Chaired

2016 "Death and Disease in the British Atlantic World," Mid-Atlantic Affiliate of the North American Conference on British Studies, Baltimore, MD, March 25-17.

TEACHING EXPERIENCE

Fordham University
Understanding Historical Change: Health and Healing in American History (Fall 2016)
The Johns Hopkins University
"Humans and Animals in the Atlantic World: Environmental, Cultural, Scientific and Moral Histories, 1500-1860," (Fall 2015)

PROFESSIONAL ACTIVITIES AND SERVICE
Manuscript Reviewer

The Maryland Historical Society Journal (2015)
Atlantic Studies (2011)

TEACHING AREAS
The Atlantic World/Early America
The Early Modern History of Medicine
The U.S. South
Women and Gender History
Early Modern Britain

LANGUAGES
French, conversational, can read with dictionary

PROFESSIONAL AFFILIATIONS
American Historical Association
Omohundro Institute of History and Culture
Society for the Social History of Medicine
American Association for the History of Medicine
Association of Caribbean Historians